

**UNIVERSITY OF JOHANNESBURG**



**FACULTY OF HEALTH SCIENCES**

**RULES AND REGULATIONS**

**2023**

**UNDERGRADUATE AND POSTGRADUATE PROGRAMMES**

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The University reserves the right to supplement, delete or change any part of a regulation without prior notice.

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## **A GENERAL INFORMATION**

### **Note**

All Faculty Rules and Regulations should always be read in conjunction with the Academic Rules and Regulations of the University, as well as the general Rules and Regulations per Department per programme.

## **HS / CONTACT INFORMATION**

### **EXECUTIVE DEAN**

Vacant  
Doornfontein Campus (DFC)

### **SECRETARY TO THE EXECUTIVE DEAN / VICE-DEANS**

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Doornfontein Campus (DFC)  
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### **VICE-DEAN (TEACHING AND LEARNING)**

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### **VICE-DEAN (RESEARCH INNOVATION AND INTERNATIONALISATION)**

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Doornfontein Campus (DFC)  
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### **HEAD OF FACULTY ADMINISTRATION (HFA)**

Ms B Vilakazi  
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### **POSTAL ADDRESS**

Faculty of Health Sciences  
University of Johannesburg  
PO Box 524  
Auckland Park  
2006

## **HS ii GENERAL ENQUIRIES FOR THE FACULTY OF HEALTH SCIENCES**

### **FACULTY ADMINISTRATION OFFICE**

Doornfontein Campus (DFC)

Tel: 011 559-6925

Web address: [web-healthscience@uj.ac.za](mailto:web-healthscience@uj.ac.za)

### **UJ CALL CENTRE**

011 559-4555

### **STUDENT ENROLMENT CENTRE ENQUIRIES**

011 559-4505/4502

### **STUDENT BURSARY ENQUIRIES**

011 559-3769/3770/2487

### **STUDENT RESIDENCE ENQUIRIES**

011 559-2863/1566

### **STUDENT FEES AND ACCOUNTS ENQUIRIES**

011 559-6937/6440

### **STUDENT LOAN ENQUIRIES**

011 559-1193/1594

### **SPORT ENQUIRIES**

011 559-2252



### HS iii MINIMUM PROGRAMME ADMISSION REQUIREMENTS

Award yourself points for each Grade 11 or Grade 12 subjects that you have passed according to the table provided below.

How to determine your Admission Point Score (APS)

An Admission Point Score (APS), explained below, has been developed for the National Senior Certificate (NSC) and the Independent Examinations Board (IEB) based in the achievement rating of each subject. The total APS is the sum of the achievement ratings of the six school subjects. Life Orientation is not counted in the calculation of the APS.

Rules to be implemented with this development.

In order to determine the Admission Point Score (APS) the following principles need to be taken into consideration:

- Applicants with the following results, WAEC, Diploma or Exam D'Etat, Certificado de Habilitacoes Literarias, Ensino Medio and Baccalaureat should be linked with the Ordinary Level (O) Grades on ITS.
- Applicants with the following results, HIGCSE, NSSC (HL), AS Level, IB (SL) and KCSE should be linked to the South African NSC (N) Grades on ITS.
- Applicants who have set for either A Level of IB (HL) should be linked to the (A) Grades on ITS.

#### ADMISSION SCORE TABLE

APS	NATIONAL			INTERNATIONAL										
	NSC (IEB/SACAI)	SC HG (M-SCORE)	SC SG (M-SCORE)	HIGCSE/NSSC (HL)	IGCSE/NSSC (OL)	AS LEVELS	A LEVELS	IB (HL)	IB (SL)	WAEC	KCSE	Diplome/Exam D' Etat	CHL/EM	Baccalaureate
10							A	7						
9							B	6						
8							C	5						
7	7 (80-100%)	A		1		A	D	4	7		A			
6	6 (70-79%)	B	A	2		B	E	3	6		B			
5	5 (60-69%)	C	B	3	A	C		2	5	A	C	80-100%	16-20	16-20
4	4 (50-59%)	D	C	4	B	D		1	4	B	D	70-79%	14-15	14-15
3	3 (40-49%)	E	D		C	E			3	C	E	50-69%	10-13	10-13
2	2 (30-39%)	F	E		D/E				2	D/E	F	30-49%	8-9	8-9
1	1 (0-29%)	G	F		F/G				1	F/G	G	0-29%	0-7	0-7

#### ABBREVIATIONS

**NSC** - National Senior Certificate (completed Grade 12 in and after 2008)

**SC HG** - Senior Certificate Higher Grade (completed Grade 12 before 2008)

**SC SG** - Senior Certificate Standard Grade (completed Grade 12 before 2008)

**IEB** - Independent Examination Board

**HIGCSE** - Higher International General Certificate of Secondary Education  
**IGCSE** - International General Certificate of Secondary Education  
**NSSC(HL)** - Namibia Senior Secondary Certificate (Higher Level)  
**NSSC(OL)** - Namibia Senior Secondary Certificate (Ordinary Level – Cambridge)  
**AS** - Advanced Subsidiary Level (Cambridge)  
**A Level** - Advanced Level (Cambridge)  
**IB(HL)** - International Baccalaureate Schools (Higher Levels)  
**IB(SL)** - International Baccalaureate Schools (Standard Levels)  
**WAEC** - West African Examination Council  
**KCSE** - Kenya Certificate of Secondary Education  
**Diplome/Exam D'Etat** - Diplome d'Etat or d'Etudes Secondaire du Cycle  
**CHL/EM** - Certificado de Habilitacoes Literarias (Mozambique) / Ensino Medio (Angola)  
**Baccalaureate** - Gabonese School Leaving

Points are awarded for the six symbols on your Grade 11 or Grade 12 report, see example below.

School Subject	Marks	APS
First Language (language of teaching and learning)	65%	5
Additional recognized language	71%	6
Mathematics or Mathematical Literacy	61%	5
Accounting	68%	5
History	81%	7
Geography	86%	7
<b>Total</b>		<b>35</b>

Compliance with the minimum programme admission requirements does not guarantee a place in a programme. The General Academic Regulations of the University applies in each case.

## HS iv EXEMPTIONS

Students may apply for module exemptions after they have registered for the current academic year. Application forms are available from the Faculty Administration Office. Closing date for submission is the end of **March** each academic year.

Students should in particular take note of the following general **Academic Regulations (AR8)** of the University:

A Head of Department may, in consultation with the Executive Dean or his/her delegated authority in accordance with a list of exemptions approved by the Executive Dean, grant exemption from and award a credit for a module, of which the content of the module was at least 80% the same, to students on the grounds that they have passed a relevant module at the University or at another accredited higher education institution.

Exemption from and awarding of credit for modules, as stipulated in AR 8.1, may not be granted for more than half the number of modules required in an undergraduate programme in which exemption and recognition are requested. A faculty may determine rules and regulations in this regard in agreement with the existing Faculty Rules and Regulations, and subject to approval by Senate. At least half the number of semester modules, including the exit level modules where appropriate, should be passed at the University for the University to award the diploma or confer the degree. The Executive Dean or his/her delegated authority concerned, in consultation with the Registrar, may give permission to the student (for legitimate reasons) to complete such exit level module(s) at another HEI in South Africa, or abroad in accordance with the academic record concerned. For the purposes of this sub-regulation, a year module counts as two semester modules, and one term module counts as half a semester module.

Only in exceptional circumstances may the Executive Dean or his/her delegated authority grant exemption from an exit level or semester core module that has been passed at another institution or in another programme.

Exemption from or credit for a module may only be granted for one further programme in addition to the programme in which the module was originally completed.

Students may not register simultaneously for two programmes at the University, or for a programme or module at another university, concurrently with their registration at the University without prior written consent of the Executive Dean of the relevant faculty/college, in consultation with the Registrar and the relevant authority of the other university (**AR5.1.18**).

## HS v RECOGNITION OF PRIOR LEARNING:

The Faculty of Health Sciences follows the University policy on the Recognition of Prior Learning. This policy is available on the University of Johannesburg website ([www.uj.ac.za](http://www.uj.ac.za)).

## HS vi ASSESSMENT:

Assessment in all programmes takes place in accordance with the University policy on assessment. This policy is available on the University of Johannesburg website ([www.uj.ac.za](http://www.uj.ac.za)). The criteria for assessment in all modules are available in learner guides.

## HS *vii* DISTINCTION CRITERIA

### Obtaining a qualification (AR11.6)

Students obtain a qualification if they have passed every module prescribed for a programme and have successfully completed service or work-integrated learning, where applicable. It is the student's responsibility to ensure all prescribed modules, service or work-integrated learning are completed.

A qualification is awarded or conferred with distinction if the requirements below, are met as applicable to the particular qualification:

#### (a) Undergraduate qualifications (Contact)

- (i) The qualification must be completed within the minimum duration as indicated in **AR10-Table 3** Duration of Programmes, unless the Executive Dean has approved a longer duration of study for legitimate reasons.
- (ii) Students must achieve a weighted and/or proportional calculated average final mark of at least 75% as determined by the Faculty Board, approved by Senate and contained in the Faculty Rules and Regulations. The weighting of the individual modules must be in line with the proportional value of the NQF credits of the module within the qualification.
- (iii) A student must obtain a minimum mark of 65% in every prescribed module at NQF Level 6 for diplomas, or NQF Level 7 for degrees, or NQF Level 8 for professional bachelor's degrees.
- (iv) Decimal marks may be rounded upwards or downwards in accordance with the decision made by the Faculty Assessment Committee concerned.
- (v) A student must never have failed a module as a first attempt in the relevant qualification.
- (vi) Students must have been registered for the full curriculum as prescribed for each academic year on a full-time or part-time basis.
- (vii) If students have transferred from another higher education institution to UJ in a similar qualification, the same requirements as stated shall apply.
- (viii) If students change qualifications within UJ, only the modules related to the new qualification will be taken into consideration in calculating whether the qualification is obtained with distinction.

#### (b) Advanced Diplomas, Postgraduate Diplomas and Honours Degrees (Contact)

- (i) The qualification must be completed within the minimum duration as indicated in **AR10-Table 3** Duration of Programmes, unless the Executive Dean has approved a longer duration of study for legitimate reasons.
- (ii) Students must achieve an average final mark for an advanced diploma, a postgraduate diploma or an honours degree, of at least 75%. For the purposes of calculating the weighted average, the final marks for all the modules comprising the qualification, must be in accordance with the NQF credit value allocated to the modules as determined by the Faculty Board, approved by Senate and contained in the Faculty Rules and Regulations.
- (iii) A student must obtain a minimum mark of 65% in every prescribed module at NQF Level 7 for advanced diplomas/BTechs, at NQF Level 8 for postgraduate diplomas and honours degrees.

- (iv) Decimal marks may be rounded upwards or downwards in accordance with the decision made by the Faculty Assessment Committee concerned.
- (v) A student must never have failed a module as a first attempt in the relevant qualification.
- (vi) Students must have been registered for the full curriculum as prescribed for each academic year on a full-time or part-time basis.
- (vii) If students have transferred from another higher education institution to UJ in a similar qualification, the same requirements as stated shall apply.
- (viii) If students change qualifications within UJ, only the modules related to the new qualification will be taken into consideration in calculating whether the qualification is obtained with distinction.

### **(c) Master's Degrees**

- (i) Students for a research master's qualification must achieve a final mark of at least 75% for the dissertation.
- (ii) Students for a coursework master's qualification must achieve an average final mark of at least 75%. This is calculated by weighting the average final marks for all the coursework modules and the final mark for the minor dissertation/research report in accordance with the credit values allocated to all the coursework modules and the minor dissertation, respectively. For example, if the credit value of the minor dissertation represents 40% of the total credit value of the qualification, the average final mark for the qualification will be weighted in the proportion of 40% for the minor dissertation and 60% for all the coursework modules.
- (iii) Decimal marks may be rounded upwards or downwards in accordance with the decision made by the Faculty Assessment Committee concerned.
- (iv) Students must have been registered for the full curriculum as prescribed for each academic year on a full-time or part-time basis.
- (v) If students have transferred from another higher education institution to UJ in a similar qualification, the same requirements as stated shall apply.
- (vi) If students change qualifications within UJ, only the modules related to the new qualification will be taken into consideration in calculating whether the qualification is obtained with distinction.

### **(d) Distance (Fully Online) programmes**

- (i) Undergraduate qualifications must be completed within the maximum duration as indicated in **AR10-Table 3** Duration of Programmes.
- (ii) An advanced diploma, a postgraduate diploma or an honours degree must be completed within the maximum duration as indicated in **AR10-Table 3** Duration of Programmes.
- (iii) The average final mark for the qualification will be calculated according to the type of qualification such as undergraduate or postgraduate.
- (iv) Apart from coursework master's, students must obtain a minimum mark of 65% in every prescribed module at the relevant NQF level for the specific qualification type.
- (v) Decimal marks may be rounded upwards or downwards in accordance with the decision made by the Faculty Assessment Committee concerned.

- (vi) Apart from coursework master's, students must never have failed a module as a first attempt in the relevant qualifications.
- (vii) Students must have been registered for the full curriculum as prescribed for each academic year.
- (viii) If students have transferred from another higher education institution to UJ in a similar qualification, the same requirements as stated shall apply.
- (ix) If students change qualifications within UJ, only the modules related to the new qualification will be taken into consideration in calculating whether the qualification is obtained with distinction.

## **HS *viii* EXPOSURE TO INFECTIOUS AGENTS**

In terms of the UJ policy adopted regarding students who are exposed to infectious agents, students who will interact with live patients in a clinical or related environment within the Faculty of Health Sciences are required to be vaccinated against Hepatitis B due to the risk of exposure. During orientation and or at the first contact session every student who will interact with live patients in a clinical or related environment will be issued with a letter which will inform them about the importance of immunization against Hepatitis B as well as the fact that it is mandatory to be vaccinated. Students are to sign for receipt for the letter and a copy will be held on their student file.

At the start of the second term students would need to sign a document stating that they have previously been exposed or received/commenced these vaccinations. By virtue of the signature on that document students confirm that they have been previously exposed/vaccinated/commenced vaccination against Hepatitis B and that they understand that false declaration constitutes fraud and that they may face disciplinary actions and medical consequences that may arise from a false declaration.

Potentially exposed students who have not started with or been exposed / vaccinated against Hepatitis B when commencing their studies in the Faculty of Health Sciences may have it done at the Primary Health Services situated on the various campuses. Vaccinations need to commence within the first month after registration. Please note that all the costs for these vaccinations are to be paid for by the student. Students may visit the Primary Health Care clinic on campus to establish the cost of the vaccinations and the procedure that needs to be followed. These vaccinations may also be done at any other registered medical provider which offers this service. In some instances, medical aid may cover the cost. Hepatitis B injections commence and are then repeated 1 month and 6 months later. Blood tests would need to be done 1 month after the last injection to establish whether the body had developed sufficient immunity against Hepatitis B. If not, booster dosages would need to be administered and the blood tests repeated. These blood tests would need to be done by a private laboratory at the cost of the student. Students who were previously exposed or received the vaccinations, would also need to determine with a blood test whether sufficient immunity has been developed against the disease.

It is strongly recommended that students who work with patients be examined for Tuberculosis before commencement of their studies and also be vaccinated against Hepatitis A, Tetanus, Meningitis, Varicella, Mumps, Measles, Rubella (if not exposed or vaccinated to these diseases before) and annually for influenza.

The University will not be held liable for any consequences resulting from an accidental exposure to any of the above infectious agents by the student.

The University has insurance with Marsh for accidental exposure to HIV due to work integrated learning. The necessary form will be issued to students for signature at the commencement of each year of study.

Everybody on a UJ campus, including students, have to comply with the COVID-19 regulations and safety measures of UJ.

### **HS ix AFRICAN INSIGHTS / ARTIFICIAL INTELLIGENCE IN THE 4IR**

It is compulsory that undergraduate students complete one of the below online modules:

1. African Insights introduces students to the intellectual traditions and debates in Africa. This module is for all undergraduate students of the Faculty or College. Upon completing the module, a students' academic record will reflect the successful completion of the module. These credits do not count towards the completion of a qualification. This is a fully online module that is offered over thirteen weeks. All student support will take place online.
2. Artificial Intelligence (AI) in the 4IR introduces undergraduate students to the applications and implications of the AI in the society, and the future of work in the Fourth Industrial Revolution (4IR). This module is for all undergraduate students of the Faculty or College. Upon completing the module, a students' academic record will reflect the successful completion of the module. These credits do not count towards the completion of a qualification. This is a fully online module that is offered over thirteen weeks. All student support will take place online.



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**Ultrasound:**

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Ms A Hajat, NDip (UJ), BTech (UJ), MTech (UJ)  
Ms TB Mahloala, B Rad (Medunsa), B Tech (UJ), MTech (UJ)

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Ms L Matshaka, MCur (UJ), BCur (UJ), RN, RM, RCN, RPN

**Midwifery and Neonatal Nursing Science:**

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## **B                    FACULTY REGULATIONS**

These regulations should be read in conjunction with the Academic Regulations of the University of Johannesburg.

### **HS1.0            DEPARTMENT OF BIOMEDICAL SCIENCES**

#### **HS1.1            BACHELOR OF HEALTH SCIENCES IN MEDICAL LABORATORY SCIENCES (B9B01Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

##### **HS1.1.1        Purpose**

The purpose of the Bachelor of Health Sciences in the Medical Laboratory Sciences programme is to produce graduates competent to apply theoretical and practical fundamental knowledge and skills in the fields of medical science and research. The programme provides extensive theoretical knowledge and practical training about various related modules and experiential training. The outcome of these combined offerings results in the achievement of purpose of the qualification as stipulated in the curricula. This qualification leads to registration with the Health Professions Council of South Africa as a Medical Laboratory Scientist.

##### **HS1.1.2        Outcomes**

1. Laboratory operations in clinical diagnostic laboratories and related fields are performed in compliance with statutory requirements for ethics, safety and quality assurance and with accuracy and precision. Specified laboratory equipment is maintained and used according to SOPs.
2. Laboratory results are interpreted correctly and integration of laboratory tests with pathophysiological conditions (Pathology) in a specific field of specialisation in accordance with statutory and operations requirements is achieved.
3. Supervisory, management and research skills are developed.
4. Critical evaluation of current and new trends in technology to improve practices and to solve problems in a variety of contexts is developed.
5. Evaluation of new information, concepts and evidence from a range of sources and the academic skills, values and attributes necessary to undertake independent research in the field of Medical Laboratory Sciences, in compliance with legislated and ethical research principles are acquired.
6. Management and entrepreneurial skills in the context of Medical Laboratory Sciences are applied.
7. Work behaviour is satisfactory with regard to time keeping, following of instructions, professional behaviour etc.

##### **HS1.1.3        Rules of access and admission requirements**

A Senior Certificate with Matriculation exemption, or an equivalent qualification at an equivalent standard as determined by a Status Committee, with the following compulsory subjects:

1. Biology with at least a Higher Grade C or Standard Grade B symbol.
2. Physical Science with at least a Higher Grade D or Standard Grade C symbol.
3. Mathematics with at least a Higher Grade D or Standard Grade C symbol.
4. English with at least a Higher Grade C or Standard Grade B symbol.



A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
30	5	4	Not accepted	4	5

### Selection criteria

Selection is based on academic merit, and an interview (if required).

### HS1.1.4 Pass requirements

1. Students are promoted to a subsequent semester of study if they have met the prerequisites.
2. Students retain credit for all modules passed.
3. Students may not register for module combinations that lead to timetable or examination clashes.
4. Students may not do Integrative Medical Laboratory Sciences III (Work Integrated Learning) until they have passed all first semester 3<sup>rd</sup> year modules.
5. Students are promoted to the second semester if they have passed at least 2 of the prescribed modules.
6. Students must pass at least 60% of the 1<sup>st</sup> year modules, including HAPDBY1 in order to qualify for readmission.

### HS1.1.5 Curriculum

First year		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Statistical Methods 1A	SMT01A1	
Communication for Medical Laboratory Sciences 1A	CMLSBA1	
Introduction to Medical Laboratory Sciences 1A	IMLSBA1	
Computer Skills	CSL01A1	
Chemistry 1A	CEMH1A1	
<b>Semester two</b>		
Cell Biology 1	CLBHBB1	
Physics 1B	PHYH1B1	

Introduction to Medical Laboratory Sciences 1B	IMLSBB1	
Immunology 1	IMMHBB1	
<b>Year modules</b>		
Human Anatomy, Physiology and Disease 1	HAPDBY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Clinical Chemistry 2A	CLCHBA2	CLBHBB1 HAPDBY1
Haematology 2A	HAEHBA2	HAPDBY1
Histopathology 2	HTPHBA2	HAPDBY1
Medical Microbiology 2A	MDMHBA2	HAPDBY1
Immunohaematology 2	IMHHBA2	IMMHBB1 HAPDBY1
<b>Semester two</b>		
Clinical Chemistry 2B	CLCHBB2	CLCHBA2
Cytogenetics 2	CTGHBB2	HAPDBY1
Cytopathology 2	CTPHBB2	HAPDBY1
Haematology 2B	HAEHBB2	HAEHBA2
Medical Microbiology 2B	MDMHBB2	MDMHBA2
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Clinical Chemistry 3	CLCHBA3	CLCHBB2
Cytopathology 3	CTPHBA3	CTPHBB2
Haematology 3	HAEHBA3	HAEHBB2
Integrative Medical Laboratory Sciences IIIA (Clinical Practice Theory)	IMLHBA3	CLCHBB2 CTGHBB2 CTPHBB2 HAEHBB2 MDMHBB2

Medical Microbiology 3 (Virology, Mycology, Parasitology)	MDMHBA3	MDMHBB2
<b>Semester two</b>		
Integrative Medical Laboratory Sciences IIIB (Clinical Practice)	IMLHBB3	IMLHBA3 CLCHBA3 CTPHBA3 HAEHBA3 MDMHBA3
Research Methods 3	RSMHBB3	
<b>Fourth year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Laboratory Management 4	LBMHBA4	IMLHBB3
<b>Year Modules</b>		
Research Project IV (Mini Dissertation in the field of Specialisation)	RSPHBY4	IMLHBB3 RSMHBB3
<b>Choose one of the following elective modules:</b>		
Clinical Chemistry 4	CLCHBY4	CLCHBA3 IMLHBB3
<b>OR</b>		
Clinical Pathology 4	CNPHBY4	CLCHBA3 HAEHBA3 MDMHBA3 IMLHBB3
<b>OR</b>		
Cytogenetics 4	CYTGBY4	CTPHBA3 IMLHBB3
<b>OR</b>		
Cytopathology 4	CTPHBY4	CTPHBA3 IMLHBB3
<b>OR</b>		
Forensic Sciences 4	FRSHBY4	IMLHBB3 CLCHBA3 CTPHBA3 HAEHBA3 MDMHBA3
<b>OR</b>		

Haematology 4	HAEHBY4	HAEHBA3 IMLHBB3
<b>OR</b>		
Histopathology 4	HTPHBY4	HTPHBA2 IMLHBB3
<b>OR</b>		
Immunohaematology 4	IMHHBY4	IMHHBA2 IMLHBB3
<b>OR</b>		
Immunology 4	IMMHB4	IMHHBA2 IMLHBB3
<b>OR</b>		
Medical Microbiology 4	MDMHBY4	MDMHBA3 IMLHBB3
<b>OR</b>		
Pharmacology 4	PHMHB4	CLCHBA3 IMLHBB3

## **HS1.2      MASTER OF HEALTH SCIENCES: BIOMEDICAL SCIENCES (M9BS1Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF level 9, 180 Credits**

**Research dissertation 100%**

### **HS1.2.1      Purpose**

The purpose of the MHS in Biomedical Sciences is to produce graduates that are competent in conducting scientific research under minimal guidance in a chosen field, and to contribute to knowledge production in that field. The research problem, its justification, process, and outcome are to be reported in a dissertation which complies with the generally accepted norms for research at these levels.

### **HS1.2.2      Outcomes**

Research is carried out under minimal guidance and a dissertation is successfully submitted.

### **HS1.2.3      Rules of access and admission requirements**

A Bachelor of Health Science (BHS): Medical Laboratory Science (MLS) degree (NQF 8) or an equivalent qualification at an equivalent standard as determined by a Status Committee and approved by the Faculty Board.

### **Selection Criteria**

Selection is based on approval by the Department's Research Committee.

#### **HS1.2.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

#### **HS1.2.5 Curriculum**

A research project and a dissertation: The research component is 100%.

<b>Module name</b>	<b>Module codes</b>
<b>Semester one</b>	
Research Project and Dissertation: Health Sciences (Biomedical Sciences)	DBS9XA1
<b>Semester two</b>	
Research Project and Dissertation: Health Sciences (Biomedical Sciences)	DBS9XB1

### **HS 1.3 DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: BIOMEDICAL SCIENCES (P9HS1Q)**

#### **Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

#### **HS 1.3.1 Purpose**

The purpose of the PhD in Health Sciences: Biomedical Sciences is to produce graduates that are competent in conducting scientific research under minimal guidance in a chosen field, and to contribute to knowledge production in that field. The research problem, its justification, process, and outcome are to be reported in a dissertation that complies with the generally accepted norms for research at these levels.

#### **HS 1.3.2 Outcomes**

Research is carried out under minimal guidance and a thesis is successfully submitted.

#### **HS 1.3.3 Rules of access and admission requirements**

A Master's degree: Biomedical Technology/Sciences (NQF 9) or an equivalent qualification at an equivalent standard as determined by a Status Committee and approved by the Faculty Board.

#### **Selection Criteria**

Selection is based on approval by the Faculty's Research Committee.

#### HS 1.3.4 Pass requirements

Refer to the Academic Regulations of the University of Johannesburg.

- To publish a minimum of 2 papers before graduation

#### HS 1.3.5 Curriculum

A research thesis. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Biomedical Sciences)	RBM10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Biomedical Sciences)	RBM10X2

### HS2.0 DEPARTMENT OF CHIROPRACTIC

#### HS2.1 BACHELOR OF HEALTH SCIENCES IN CHIROPRACTIC (B9C01Q)

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

Students start with a four-year degree. After the successful completion of the Professional Master's degree, you will be entitled to register with the Allied Health Professions Council of South Africa.

#### HS2.1.1 Purpose

The purpose of this curriculum is to give the student a thorough understanding and working knowledge of the structure and function of the human body in both health and disease and the fluctuations that lie between these poles.

Chiropractic programme aims to develop the emerging Chiropractor in light of the following:

- Primary contact practitioners.
- Specialist assessors of neuromusculoskeletal system.
- Specialists in the field of spinal and extremity manipulation.

#### HS2.1.2 Outcomes

**On completion of this programme, the student will be able to:**

**ELO 1** Apply the relevant procedures and technologies in order to clinically assess, diagnose, treat and manage (including appropriate referral) of the patient in terms of normal and abnormal findings.

**ELO 2** Apply the principles, proven techniques and specialized skills required for the promotion of musculoskeletal health and the prevention and rehabilitation of problems of the musculoskeletal system.

**ELO 3** Demonstrate the application of pertinent knowledge of the biopsychosocial, biological, pharmacological and basic sciences in terms of chiropractic and community health.

**ELO 4** Demonstrate appropriate communication skills for personal and professional development within a chiropractic context and apply the principles of medical ethics within a multi-cultural and international context.

**ELO 5** Acquire knowledge of the entrepreneurial sciences and professional practices relevant to chiropractic.

**ELO 6** Evaluate and interrogate multiple sources of literature as critical users and developers of research in the Chiropractic field, continue with lifelong learning and become a reflective practitioner.

### **HS2.1.3 Rules of access and admission requirements**

The admission requirements for the BHS Chiropractic programme are as tabulated below:

A Senior Certificate with matriculation exemption, or an equivalent qualification at an equivalent standard as determined by a Status Committee, with the following:

Two of the following modules:

1. Mathematics with at least a Higher Grade D or Standard Grade C symbol.
2. Physical Science with at least Higher Grade D or Standard Grade C symbol.
3. Biology with at least Higher Grade D or Standard Grade C symbol.

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
26	5	4	Not accepted	4	4

### **Selection criteria**

Selection is based on:

1. Applicants with Physical Sciences or Life Sciences will be considered, based on academic merit.
2. A personal interview.
3. Letters of recommendation from at least 2 practising doctors of Chiropractic.

### **HS2.1.4 Pass requirements**

1. Students are promoted:
  - a. To full second-year status if they have passed all the first-year modules.
  - b. To full third-year status if they have passed all the second-year modules.
  - c. To full fourth-year status if they have passed all third-year modules.
2. The pass mark for all clinical/practical modules is 60% from the third year of study.
3. In order to gain readmission to the programme, first year students must pass a minimum of 60% of the first year modules.

4. Students may enrol for a module in the following year, provided that:
  - a. They have passed the prerequisite module.
  - b. They have passed both the theory and practical final summative assessments in a module comprising a theory and a practical component.
5. Students retain credit for all modules passed.
6. Students must pass all components of the module(s) to obtain credit for the module(s).
7. Students may not register for module combinations that lead to timetable clashes.
8. 100% attendance of and participation in the practical and/or clinical components are compulsory. If students fail to comply with this requirement, they may fail the module and be required to repeat the full module.
9. If students fail any third or fourth year module(s), they must repeat all the practical/clinical modules of the respective year. The practical and theoretical components are assessed in an integrated manner and students will therefore be required to repeat and pass the module(s) in entirety, as indicated in the relevant learning guide. If students fail to comply with this requirement, they may not be promoted to the following year of study.
10. Students will be required to complete a stipulated clinical component (in line with any relevant Professional Board requirements) prior to conferment of degree.

### HS2.1.5 Student registration with the Professional Council

Students must register with the Allied Health Professions Council of South Africa at the beginning of each year of registration, at which time a fee is payable. It is the students' responsibility to ensure they are registered from the second year of study. During the fourth year of study, students must successfully complete a First Aid course for which the Department will make provision. An additional levy will be charged. Students will subsequently be personally responsible for maintaining the validity of this course.

### HS2.1.6 Curriculum

All modules are Continuous Evaluation modules.

First year		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Physics of Health Sciences 1	PHYCHA1	
<b>Semester Two</b>		
Sociology of Health and Health Care	SOHCHB1	
<b>Year modules</b>		
Anatomy and Physiology 1	ANPCHY1	
Biodiversity	BIODIY1	
Chemistry 1	CETCHY1	
Chiropractic Principles and Practice 1	CPPCHY1	
Personal and Professional Development 1	PPDCHY1	



<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Medical Microbiology	MDMCHA2	BIODIY1
<b>Year modules</b>		
Anatomy 2	ANTCHY2	ANPCHY1
Chiropractic Principles and Practice 2	CPPCHY2	CPPCHY1
Human Biochemistry and Disease 1	HBDCHY2	CETCHY1
Personal and Professional Development 2	PPDCHY2	PPDCHY1
Physiology 2	PHYCHY2	ANPCHY1
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Pharmacology	PHMCHA3	HBDCHY2
<b>Semester two</b>		
Radiology	RADCHB3	ANTCHY2
<b>Year modules</b>		
Clinical Diagnostics 3	CLDCHY3	ANTCHY2 PHYCHY2 HBDCHY2 MDMCHA2
Clinical Psychology	CLPCHY3	SOHCHB1
Chiropractic Principles and Practice 3	CPPCHY3	ANTCHY2 PHYCHY2 HBDCHY2 MDMCHA2 CPPCHY2
Myofascial and Auxiliary Therapies 3	MATCHY3	ANTCHY2 PHYCHY2 HBDCHY2 MDMCHA2 PHYCHA1
Pathology 3	PATCHY3	ANTCHY2 PHYCHY2 HBDCHY2 MDMCHA2

Fourth year		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Clinical and Applied Biomechanics 4	CABCHA4	CPPCHY3 MATCHY3 CLDCHY3
Research Methodology 4	REMCHA4	CPPCHY3
<b>Semester two</b>		
Myofascial and Auxiliary Therapies 4	MATCHB4	CPPCHY3 MATCHY3 CLDCHY3
Research Project 4	REPCHB4	REMCHA4
<b>Year modules</b>		
Clinical Chiropractic 4	CLCCHY4	CPPCHY3 MATCHY3 CLDCHY3 PATCHY3 PHMCHA3 RADCHB3
Chiropractic Principles and Practice 4	CPPCHY4	CPPCHY3 MATCHY3 CLDCHY3 PATCHY3 PHMCHA3 RADCHB3
Clinical Practice 4	CPRCHY4	CPPCHY3 MATCHY3 CLDCHY3 PATCHY3 PHMCHA3 RADCHB3
Radiology 4	RADCHY4	CPPCHY3 MATCHY3 CLDCHY3 PATCHY3 PHMCHA3 RADCHB3

## **HS2.2      MASTER OF HEALTH SCIENCES IN CHIROPRACTIC (M9C01Q)**

**Duration of programme**

**Full-time: 2 Years**

**NQF Level 9, 180 Credits**

**Course work 70% and minor dissertation 30%**

After the successful completion of the Professional Master of Health Sciences in Chiropractic degree you will be entitled to register with the Allied Health Professions Council of South Africa.

### **HS2.2.1      Purpose**

The purpose of this curriculum is to give the student a thorough understanding and working knowledge of the structure and function of the human body in both health and disease and the fluctuations that lie between these poles.

The Chiropractic programme aims to develop the emerging Chiropractor as a:

- Primary contact practitioner.
- Specialist assessor of neuromusculoskeletal system.
- Specialist in the field of spinal and extremity manipulation.

### **HS2.2.2      Outcomes**

**On completion of this programme, the student will be able to:**

**ELO 1** Apply the relevant procedures and technologies in order to clinically assess, diagnose, treat and manage (including appropriate referral) of the patient in terms of normal and abnormal findings.

**ELO 2** Apply the principles, proven techniques and specialized skills required for the promotion of musculoskeletal health and the prevention and rehabilitation of problems of the musculoskeletal system.

**ELO 3** Demonstrate the application of pertinent knowledge of the biopsychosocial, biological, pharmacological and basic sciences in terms of chiropractic and community health.

**ELO 4** Demonstrate appropriate communication skills for personal and professional development within a chiropractic context and apply the principles of medical ethics within a multi-cultural and international context

**ELO 5** Acquire knowledge of the entrepreneurial sciences and professional practices relevant to chiropractic.

**ELO 6** Critically use and interrogate multiple sources of literature in order to develop and contribute towards research output in a Chiropractic related field and to continue with lifelong learning and become a reflective practitioner.

### **HS2.2.3      Rules of access and admission requirements**

The minimum admission requirement is a Bachelor of Health Sciences in Chiropractic (BHSc Chiropractic). Applications from persons with an equivalent qualification will be considered by a constituted status committee in line with the University's & Faculty's regulations.

#### **Selection criteria**

None

#### HS2.2.4 Pass requirements

1. Students must pass all components of the module(s) to obtain credit for the module(s).
2. Students may not register for module combinations that lead to timetable clashes.
3. 100% attendance of and participation in the practical and/or clinical components are compulsory. If students fail to comply with this requirement, they may fail the module and be required to repeat the full module.
4. If students fail a module(s), they must repeat all the practical/clinical modules of the respective year. The practical and theoretical components are assessed in an integrated manner and students will therefore be required to repeat and pass the module(s) in entirety, as indicated in the relevant learning guide. If students fail to comply with this requirement, they may not graduate.
5. Students will be required to complete a stipulated clinical component (in line with any relevant Professional Board requirements) prior to conferment of degree.

#### HS2.2.5 Student registration with the Professional Council

1. Students must register with the Allied Health Professions Council of South Africa at the beginning of each year of registration, at which time a fee is payable. It is the students' responsibility to ensure they are registered.
2. After graduation, students must apply to the Council for registration as a Chiropractor.
3. Full registration will only be granted after completion of a period of Community Service / Internship as determined by the Allied Health Professions Council of South Africa.

#### HS2.2.6 Curriculum

A research project and a minor dissertation. The research component is 30%.

First year		
Module name	Module code	Prerequisite code
Semester one		
Clinical and Applied Biomechanics 5	CAB9XA1	
Practice Management and Jurisprudence	PMJ9X01	
Year modules		
Clinical Chiropractic 5	CHC9XY1	
Chiropractic Clinical Practice 5A	CHP9XA1	
Chiropractic Principles and Practice 5	CPP9XY1	
Myofascial and Auxiliary Therapies 5	MAT9XA1	
Research Project and Dissertation 5A	RPD9XA1	
Second year		
Module name	Module code	Prerequisite code

<b>Semester one</b>		
Research Project and Dissertation 5B	RPD9XB2	
<b>Semester two</b>		
Research Project and Dissertation 5C	RPD9XC2	
<b>Year modules</b>		
Chiropractic Clinical Practice 5B	CHP9XB2	

## **HS2.3      DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: CHIROPRACTIC (P9HS2Q)**

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

### **HS2.3.1      Purpose**

The purpose of this programme is to provide the qualifying student with advanced analytical problem-solving and reflective competencies in the field of chiropractic, and to enable them to act as a leader within the chiropractic research field. This will be achieved by making an original contribution to the knowledge content of chiropractic through independent research.

### **HS2.3.2      Outcomes**

On completion of this qualification the graduate will be competent to conduct, present/publish and supervise accredited research within the field of chiropractic, in order to advance professional development and provide health education to individuals and communities.

### **HS2.3.3      Rules of access and admission requirements**

The minimum admission requirement is one of the following:

- Master of Health Sciences in Chiropractic
- Master of Technology: Chiropractic
- An Equivalent qualification in a relevant field at an NQF level 9. Applications from persons with an equivalent qualification will be considered by a constituted status committee in line with the University's & Faculty's regulations.

#### **Selection criteria**

Selection is based on approval of the student's research proposal by the Department's Research Committee and then the Faculty's Research and Ethics Committees.

### **HS2.3.4      Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg

### HS2.3.5 Curriculum

A research thesis. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Chiropractic)	RPC10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Chiropractic)	RPC10X2

### HS3.0 DEPARTMENT OF COMPLEMENTARY MEDICINE

#### HS3.1 BACHELOR OF HEALTH SCIENCES IN COMPLEMENTARY MEDICINE (B9CM1Q)

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

##### HS3.1.1 Purpose

The purpose of this qualification is to provide the qualifying student with the necessary knowledge, skills and competencies required to successfully consult, treat pre-diagnosed patients and communicate holistic advice to patients. The graduate will be a team player capable of working in multidisciplinary teams to promote the profession.

##### HS3.1.2 Outcomes

On completion of this programme the graduate will be competent to practice as a Complementary Medicine (CM) healthcare therapist within the community. The graduate will be eligible to register with the Allied Health Professions Council of South Africa as an acupuncture therapist. The graduate will be able to conduct research within the field of CM in order to advance professional development and provide health education to individuals and communities.

##### HS3.1.3 Rules of access and admission requirements

A Senior Certificate with matriculation exemption, or an equivalent qualification at an equivalent standard as determined by a Status Committee, with the following:

Two of the following subjects:

1. Mathematics with at least a Higher Grade D or Standard Grade C symbol.
2. Physical Science with at least Higher Grade D or Standard Grade C symbol.
3. Biology with at least Higher Grade D or Standard Grade C symbol.

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
26	5	4	Not accepted	4	4

### Selection criteria

Selection is based on:

1. Academic merit.
2. Letters of recommendation from at least 2 practitioners of CM, or;
3. Letter of recommendation from 2 practitioners from the Health Training Centre, UJ.
4. Completion of an assignment.

### HS3.1.4 Pass requirements

1. Students are promoted:
  - a. To full second-year status if they have passed all the first-year modules.
  - b. To full third-year status if they have passed all the second-year modules.
  - c. To full fourth-year status if they have passed all the third-year modules.
2. The pass mark for all clinical/practical modules is 60% from the third year of study.
3. In order to gain readmission to the programme, first year students must pass a minimum of 60% of the first year modules.
4. Students may enrol for a module in the following year, provided that:
  - a. They have passed the prerequisite module.
  - b. They have passed both the theory and practical final summative assessments in a module comprising a theory and a practical component.
5. Students retain credit for all modules passed.
6. Students must pass all components of the module(s) to obtain credit for the module(s).
7. Students may not register for module combinations that lead to timetable clashes.
8. 100% attendance of and participation in the practical and/or clinical components are compulsory. If students fail to comply with this requirement, they may fail the module and be required to repeat the full module.
9. If students fail any third or fourth year module(s), they must repeat all the practical/clinical modules of the respective year. The practical and theoretical components are assessed in an integrated manner and students will therefore be required to repeat and pass the module(s) in entirety, as indicated in the relevant learning guide. If students fail to comply with this requirement, they may not be promoted to the following year of study.
10. Students will be required to complete a stipulated clinical component (in line with any relevant Professional Board requirements) prior to conferment of degree.

### HS3.1.5 Student Registration with Professional Council

1. Students must register with the Allied Health Professions Council of South

Africa (AHPCSA) at the beginning of each year of registration, at which time a fee is payable to the AHPCSA. It is the students' responsibility to ensure they are registered from the second year of study.

- After graduation, students may apply to the AHPCSA for registration as an Acupuncturist. Full registration will only be granted after completion of a period of Community Service/ Internship as determined by the Allied Health Professions Council of South Africa.

### HS3.1.6 Curriculum

All modules are Continuous Evaluation modules.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Physics for Health Sciences 1	PHYCHA1	
<b>Semester two</b>		
Sociology of Health and Health Care	SOHCHB1	
<b>Year modules</b>		
Anatomy and Physiology 1	ANPCMY1	
Biodiversity	BIODIY1	
Chemistry 1	CETCHY1	
Complementary Medicine Practices 1	COPCMY1	
Personal and Professional Development 1	PPDCMY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Medical Microbiology	MDMCHA2	BIODIY1
<b>Year modules</b>		
Anatomy 2	ANTCMY2	ANPCMY1 COPCMY1 BIODIY1
Complementary Medicine Practices 2	COPCMY2	ANPCMY1 BIODIY1 COPCMY1
Human Biochemistry and Disease 1	HBDCMY2	ANPCMY1 CETCHY1 PHYCHA1



Physiology 2	PHYCMY2	ANPCMY1 COPCMY1
Personal and Professional Development 2	PPDCMY2	PPDCMY1 SOHCHB1
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Basic Life Support	BLSCMA3	ANTCMY2 PHYCMY2
Pharmacology	PHMCMA3	ANTCMY2 PHYCMY2 HBDCMY2
<b>Semester two</b>		
Phytochemistry	PHTCMB3	HBDCMY2 MDMCHA2 COPCMY2
<b>Year Modules</b>		
Clinical Diagnostics 3	CLDCMY3	ANTCMY2 PHYCMY2 COPCMY2 MDMCHA2
Clinical Psychology	CLPCHY3	ANTCMY2 PHYCMY2 COPCMY2 PPDCMY2
Complementary Medicine Practices 3	COPCMY3	ANTCMY2 PHYCMY2 HBDCMY2 MDMCHA2 COPCMY2 PPDCMY2
Nutritional Medicine	NTMCMY3	PHYCMY2 HBDCMY2 COPCMY2
Pathology	PATCMY3	ANTCMY2 PHYCMY2 HBDCMY2 MDMCHA2
<b>Choose one of the following elective modules</b>		

Homeopathic Materia Medica 1	HMMCMY3	ANTCMY2 PHYCMY2 HBDCMY2 MDMCHA2 COPCMY2 PPDCMY2
<b>OR</b>		
Phytotherapy 1	PTTCMY3	ANTCMY2 PHYCMY2 HBDCMY2 MDMCHA2 COPCMY2 PPDCMY2
<b>Fourth year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Good Pharmacy Practice	GPPCMA4	PHMCMA3 NTMCMY3 PHTCMB3 COPCMY3
Practice Management and Jurisprudence 1	PMJCMA4	COPCMY3 CLDCHY3
Research Methods in Complementary Medicine	REMCMA4	PATCMY3 PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 CLDCHY3
<b>Semester two</b>		
Compounding and Dispensing Complementary Medicine	CDDCMB4	GPPCMA4 PHMCMA3 NTMCMY3 PHTCMB3 COPCMY3
Research Project in Complementary Medicine	REPCMB4	REMCMA4
<b>Year Modules</b>		

Applied Nutritional Medicine	ANMCMY4	PATCMY3 PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 CLDCHY3
Clinical Practice 1	CPRCMY4	BLSCMA3 PATCMY3 PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 CLDCHY3
<b>Choose one of the following elective modules</b>		
Applied Homeopathic Materia Medica	AHMCMY4	PATCMY3 PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 CLDCHY3 HMMCMY3*
<b>OR</b>		
Applied Phytotherapy 1	APTCMY4	PATCMY3 PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 CLDCHY3 PTTCMY3*
<b>Choose one of the following elective modules</b>		
Homeopathic Materia Medica 2	HMMCMY4	PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 CLDCHY3 HMMCMY3*
<b>OR</b>		
Phytotherapy 2	PTTCMY4	PATCMY3 PATCMY3 PHMCMA3 CLPCHY3 NTMCMY3 PHTCMB3 COPCMY3 PTTCMY3*

## **HS3.2**      **POSTGRADUATE DIPLOMA IN ACUPUNCTURE (E9A01Q)**

### **Duration of programme**

**Part-time: Minimum 2 years**

**NQF Level 8, 120 Credits**

### **HS3.2.1**      **Purpose**

The purpose of the Postgraduate Diploma in Acupuncture is to provide existing health care professionals with knowledge of the principles, practice and safety issues of the use of acupuncture techniques. The qualifying graduate will be able to competently apply and integrate clinical approaches that optimise the use of the various employed techniques in acupuncture therapeutics; incorporate acupuncture as a treatment modality in their practice as clinically indicated; and be able to integrate modern medical science and acupuncture diagnostics and therapeutics to improve patient care and satisfaction. The graduate will also be a team player capable of working in multidisciplinary teams to promote the profession.

### **HS3.2.2**      **Outcomes**

Students will be able to:

Interpret clinical data in order to identify and assess the range of health problems presented to acupuncturists, and implement a comprehensive and holistic approach with the integration of relevant clinical competencies and therapeutic acupuncture knowledge.

### **HS3.2.3**      **Rules of access and admission requirements**

Master of Technology (M. Tech): Homoeopathy, M. Tech Chiropractic, Bachelor of Medicine or Bachelor of surgery (MBChB), Double Bachelors from the University of the Western Cape (UWC) (BSc Complementary Health Science plus a Bachelor's degree in one of the following: Phytotherapy, Naturopathy, or Unani-Tibb).

Applications from persons with other related qualifications will be considered by a constituted status committee in line with the University and Faculty regulations.

### **HS3.2.4**      **Pass requirements**

1. The pass mark for all clinical/practical modules is 60%.
2. The pass mark for all theory modules is 50%.
3. Students must pass all components of the module(s) to obtain credit for the module(s).
4. Students may be required to complete a stipulated clinical component (in line with any relevant Professional Board requirements) prior to conferment of degree.

### **HS3.2.5**      **Student Registration with Professional Council**

Students must register with the Allied Health Professions Council of South Africa (AHPCSA) at the beginning of each year of registration, as a student within the

domain of acupuncture, at which time a fee is payable to the AHPCSA. It is the students' responsibility to ensure they are registered from the second year of study.

After graduation, students can apply to the AHPCSA for registration as an Acupuncturist. Full registration will only be granted after completion of a period of Community Service/ Internship as determined by the Allied Health Professions Council of South Africa.

### HS3.2.6 Curriculum

First year		
Module name	Module code	Prerequisite code
Acupuncture Therapeutics 1	ACT01Y1	
Clinical Acupuncture 1	CLACMY1	
Foundations of Acupuncture	FOACMY1	
Needling Techniques 1	NETCMY1	
Second year		
Acupuncture Therapeutics 2	ACT01Y2	ACT01Y1
Applied Research	APRCMY2	FOACMY1
Clinical Acupuncture 2	CLACMY2	CLACMY1
Ethics and Jurisprudence	ETJCMY2	NETCMY1

### HS3.3 [POSTGRADUATE DIPLOMA IN PHYTOTHERAPY \(E9P01Q\)](#)

**Duration of programme**

**Part-time: Minimum 2 years**

**NQF Level 8, 120 Credits**

#### HS3.3.1 Purpose

The purpose of this programme is to develop a graduate competent in the knowledge, attitudes, insight and skills required for diagnosing and managing patients in the field of Phytotherapy and formulating comprehensive treatment plans for health promotion. Graduates will be competent to compound, dispense and prescribe herbal medicines within their scope of practice and will also be a team player capable of working in multidisciplinary teams to promote the profession.

#### HS3.3.2 Outcomes

Derive, analyse, and interpret clinical data in order to identify and assess the range of health problems presented to phytotherapists, and implement a comprehensive and holistic approach with the integration of relevant clinical competencies and phytotherapy knowledge.

#### HS3.3.3 Rules of access and admission requirements

Master of Technology (M. Tech): Homoeopathy, M. Tech Chiropractic, Bachelor of Medicine or Bachelor of surgery (MB ChB), Double Bachelors from the University of the Western Cape (UWC) (BSc Complementary Health Science plus a Bachelor's degree in one of the following: Chinese Medicine and Acupuncture, Naturopathy, or Unani-Tibb).

Applications from persons with other related qualifications will be considered by a constituted status committee in line with the University and Faculty regulations.

### HS3.3.4 Pass requirements

1. The pass mark for all clinical/practical modules is 60%.
2. The pass mark for all theory modules is 50%.
3. Students must pass all components of the module(s) to obtain credit for the module(s).
4. Students may be required to complete a stipulated clinical component (in line with any relevant Professional Board requirements) prior to conferment of degree.

### HS3.3.5 Student Registration with Professional Council

Students must register with the Allied Health Professions Council of South Africa (AHPCSA) at the beginning of each year of registration, as a student within the domain of phytotherapy, at which time a fee is payable to the AHPCSA. It is the students' responsibility to ensure they are registered from the second year of study.

After graduation, students can apply to the AHPCSA for registration as a Phytotherapist. Full registration will only be granted after completion of a period of Community Service/ Internship as determined by the Allied Health Professions Council of South Africa.

### HS3.3.6 Curriculum

First year		
Module name	Module code	Prerequisite code
Applied Phytotherapy 1	APT01Y1	
Foundations of Phytotherapy 1	FOPCMY1	
Herbal Pharmacognosy	HPCCMY1	
Herbal Pharmacology and Phytochemistry	HPPCMY1	
Second year		
Herbal Pharmacy	HEPCMY2	HPCCMY1
Applied Research	APRCMY2	FOPCMY1
Clinical Phytotherapy	CLPCMY2	APT01Y1
Ethics and Jurisprudence	ETJCMY2	HPPCMY1

**HS3.4      MASTER OF HEALTH SCIENCES IN COMPLEMENTARY MEDICINE (M9CM1Q)**  
**Duration of programme**  
**Full-time: 2 Years**  
**NQF Level 9, 180 Credits**  
**Course work 70% and minor dissertation 30%**

**HS3.4.1      Purpose**

The purpose of this qualification is to develop a graduate competent in the knowledge, attitudes, insight and skills required for diagnosing and treating patients in the field of CM as well as formulating comprehensive management plans for health promotion.

The qualifying graduate will be able to competently apply and integrate theoretical principles, evidence-based techniques, practical exposure and appropriate skills as a healthcare practitioner. The programme of study will produce a well-rounded graduate who will be competent to compound, dispense and prescribe CMs within that scope of practice. The graduate will be a team player capable of working in multidisciplinary teams to promote the profession.

**HS3.4.2      Outcomes**

On completion of this programme the graduate will be competent to practice as a CM healthcare practitioner, as either a homeopath or phytotherapist, within the community. The graduate will be eligible to register with the Allied Health Professions Council of South Africa as a practitioner within the respective CM field. The graduate will be able to conduct research in order to develop and contribute towards research output in a CM related field in order to advance professional development in the provision of health care and education to individuals and communities.

**HS3.4.3      Rules of access and admission requirements**

The minimum admission requirement is the Bachelor of Health Sciences in Complementary Medicine (BHS CM). Applications from persons with an equivalent qualification will be considered by a constituted status committee in line with the University's & Faculty's regulations.

**HS3.4.4      Pass requirements**

1. The pass mark for all clinical/practical modules is 60%.
2. Students retain credit for all modules passed.
3. Students must pass all components of the module(s) to obtain credit for the module(s).
4. 100% attendance of and participation in the practical and/or clinical components are compulsory. If students fail to comply with this requirement, they may fail the module and be required to repeat the full module.
5. Students will be required to complete a stipulated clinical component (in line with any relevant Professional Board requirements) prior to conferment of degree.
6. If students fail any module(s), they must repeat all the practical/clinical modules (excluding the entrance OSCE). The practical and theoretical components are assessed in an integrated manner and students will therefore be required to repeat and pass the module(s) in entirety, as indicated in the relevant learning guide.
7. All students are required to complete a research project for conferment of the qualification which will be weighted as 30% of the master's year.

### HS3.4.5 Student Registration with Professional Council

1. Students must register with the Allied Health Professions Council of South Africa (AHPCSA) at the beginning of the year, at which time a fee is payable to the AHPCSA. It is the students' responsibility to ensure they are registered.
2. After graduation, students must apply to the Council for registration within the respective field of CM.
3. Registration as a practitioner may only be granted by the AHPCSA after completion of a prescribed internship as determined by the AHPCSA.

### HS3.4.6 Curriculum

A research project and a minor dissertation. The research component is 30%.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Practice Ethics and Jurisprudence 2	PEJ9XA1	
<b>Year modules</b>		
Applied Homeopathic Materia Medica 2	AHM9XY1	
Applied Phytotherapy 2	APT9XY1	
Clinical Practice 2	CPR9XY1	
Homeopathic Materia Medica 3	HMM9XY1	
Phytotherapy 3	PTT9XY1	
Research Project	REP9XY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Homeopathy Internship	HPI9XA2	
<b>Semester two</b>		
Homeopathy Internship	HPI9XB2	
<b>Year modules</b>		
Research Project	REP9XY2	



### **HS3.5 DOCTOR OF HEALTH SCIENCES IN COMPLEMENTARY MEDICINE (P9CM1Q)**

#### **Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF Level 10, 360 Credits**

**Research thesis 100%**

#### **HS3.5.1 Purpose**

The purpose of this programme is to provide the qualifying student with advanced analytical problem-solving and reflective competencies in the field of complementary medicine (CM), and to enable them to act as a leader within the CM research field. This will be achieved by making an original contribution to the knowledge content of CM through independent research.

#### **HS3.5.2 Outcomes**

On completion of this qualification, the graduate will be competent to conduct, present/publish and supervise accredited research within the field of CM, in order to advance professional development and provide health education to individuals and communities.

#### **HS3.5.3 Rules of access and admission requirements**

The admission requirement for the DHSc CM programme is a Masters of Health Sciences in Complementary Medicine (MHSc CM) (Homeopathy or Phytotherapy) or Master of Technology (M. Tech): Homoeopathy, or an equivalent qualification in a relevant field at an NQF level 9, generating a minimum of 180 credits for example: phytochemistry, pharmacology or related analytical fields. Applications from persons with an equivalent qualification will be considered by a constituted status committee in line with the University's & Faculty's regulations.

##### **Selection criteria**

Selection is based on approval of the student's research proposal by the Department and Faculty's Research and Ethics Committees.

#### **HS3.5.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

#### **HS3.5.5 Curriculum**

A research thesis. The research component is 100%.

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Thesis: Complementary Medicine	CPMEDA1
<b>Semester two</b>	
Research Project and Thesis: Complementary Medicine	CPMEDB1

## **HS4.0      DEPARTMENT OF EMERGENCY MEDICAL CARE**

### **HS4.1      HIGHER CERTIFICATE IN EMERGENCY MEDICAL CARE (F9E01Q)**

**Mode of Offering: Contact**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Offered Part-time: Minimum 2 years and Maximum 3 years**

**NQF Level 5, 132 Credits**

#### **HS4.1.1      Purpose**

This programme is designed to produce entry-level emergency care providers who are clinical assistants within the emergency medical care environment thereby replacing the Basic Ambulance Assistant Course as the entry qualification for emergency medical services. The qualification provides an entry point into a career in emergency medical services thereby creating access and an opportunity for employment within the emergency services and related industries. The programme will develop the necessary foundational knowledge; skills and attitudes necessary to form the basis for further study in the field of prehospital emergency medical care and will provide access to further study within the HEQSF.

Graduates will practice primarily on ambulances within South Africa in rural and urban contexts that range from sophisticated emergency medical care facilities to remote primary health care settings. This programme also aims to promote an understanding of the multi-disciplinary approach to effective, efficient patient care.

#### **HS4.1.2      Outcomes**

1. Demonstrate effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which Emergency Care Assistants operate while maintaining personal health, wellness and safety.
2. Demonstrate knowledge of the structure and function of Emergency Medical Service (EMS) systems in South Africa and how they relate to the broader health care structures within the country.
3. Provide healthcare as part of a team within an emergency care environment to all sectors of the community within the Emergency Care Assistant scope of practice.

#### **HS4.1.3      Rules of access and admission requirements**

The minimum entry requirement is the National Senior Certificate with appropriate module combinations and levels of achievement as defined in the Minister's policy, Minimum Admission Requirements for Higher Certificate, Diploma and Bachelor's Degree Programmes Requiring a National Senior Certificate, Government Gazette, Vol. 482, 27961, 18 August 2005.

In addition to adherence to the University's student admission policy the Department has the following requirements:

The applicant with a Senior Certificate (Prior to 2009) must have at least a minimum of an E symbol on Higher Grade or a D symbol on Standard Grade pass for all of the following subjects:

- English
- Mathematics
- Biology or Physical Sciences

### For applicants who obtained a Grade 12 during or after 2009:

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
21	5	3	Not accepted	3	4

### Selection criteria

Selection will be based on:

- academic merit; APS
- a structured personal interview;
- a phobia evaluation;
- medical examination;
- physical fitness and swimming proficiency evaluation;
- an English proficiency evaluation;
- previous appropriate experience (a recommendation).

#### HS4.1.4 Pass requirements

1. Students may graduate once they have passed all of the modules.
2. Due to the integrated nature of certain modules, individual credits are NOT retained unless all modules are passed within the same academic year. This ruling applies to the following modules:

H.Cert EMC
EMCCTY1
EMCCPY1
CLPECY1

3. If students fail any of the modules within the programme, they need to register for, and pass the physical preparedness module again.
4. 100% attendance of all theory lectures, practicals, experiential or clinical components as well as tutorials is compulsory.
5. In order to gain readmission to the programme, students must pass a minimum of 60% of the modules.
6. Students may not register for the same module for a third time without permission from the Head of Department and Executive Dean.
7. Students have a maximum of two years to complete the full-time offering, and three years to complete the part-time offering.

#### HS4.1.5 Practical Training (Clinical learning)

1. Students must, by the end of the relevant year of study, complete the Clinical Learning requirements which are detailed in the relevant study guides in order to be granted a credit for the clinical practice module.
2. Clinical practice is rostered at set periods during the academic year in conjunction

with cooperative partners and cannot be personalised.

3. 100% attendance of all rostered shifts is compulsory. Students who miss shifts due to illness or injury will be required make up the missed shifts prior to the end of the academic year if they are to be granted a credit for the practical training modules.

#### **HS4.1.6 Specific rules and regulations for Emergency Medical Care students**

1. Students must familiarize themselves with the internal rules and regulations of the Department of Emergency Medical Care. These rules and regulations, as set out in the Departmental policy document, are binding.
2. Students who fail to attend theory classes will be requested to provide in writing reasons for their non-attendance.
3. The programme is not offered as a distance- learning programme. Students who elect to leave the country will be unable to continue with their studies.
4. All students (even if not registered for Clinical Practice within that academic year) are required to see a minimum number of patients each year as determined by the department whilst they are registered. This is a requirement to ensure that clinical competencies are retained.
5. All registered students are required to attend physical training sessions as rostered.
6. Students may not register for a third time for the same module unless allowed by the Head of Department and Executive Dean of the Faculty.
7. Students are required to adhere to the requirements of the department relating to uniform and personal appearance.

#### **HS4.1.7 Curriculum**

##### **FULL-TIME OFFERING:**

All modules are Continuous Evaluation modules.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Basic Sciences: Physics 1A	PHYCEA1	
End User Computing	ENUC011	
<b>Semester two</b>		
Basic Sciences: Chemistry	CHBCEB1	
Mental Health and Wellness	MHAECB1	
<b>Year modules</b>		
Foundations of Professional Practice	FOPPCA1	
Emergency Medical Care 1 Theory	EMCCTY1	
Emergency Medical Care 1 Practical	EMCCPY1	
Clinical Practice 1	CLPECY1	

Anatomy 1	ANATCY1	
Physiology 1	PHYSEY1	
Physical Preparedness 1	PHPRCY1	

### **PART-TIME OFFERING:**

All modules are Continuous Evaluation modules.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Basic Sciences: Physics 1A	PHYCEA1	
End User Computing	ENUC011	
<b>Semester two</b>		
Basic Sciences: Chemistry	CHBCEB1	
Mental Health and Wellness	MHAECB1	
<b>Year modules</b>		
Anatomy 1	ANATCY1	
Physiology 1	PHYSEY1	
Physical Preparedness 1A	PHPRCY1	
<b>Second Year</b>		
<b>Semester One</b>		
Foundations of Professional Practice	FOPPCA1	
<b>Year Modules</b>		
Emergency Medical Care 1 Theory	EMCCTY1	
Emergency Medical Care 1 Practical	EMCCPY1	
Clinical Practice 1	CLPECY1	
Physical Preparedness 1B	PHPRCY2	

## **HS4.2**      **DIPLOMA IN EMERGENCY MEDICAL CARE (D9E01Q)**

### **Duration of programme**

**Full-time: Minimum 2 years**

**NQF Level 6, 240 Credits**

### **HS4.2.1**      **Purpose**

This is a mid-level worker qualification within the Emergency Care profession. Successful completion leads to registration with the Health Professions Council of South Africa (HPCSA) as a Paramedic. The programme recognizes the key competences required by Paramedics who are able to work independently in a variety of prehospital emergency care contexts.

### **HS4.2.2**      **Outcomes**

1. Demonstrate effective communication and apply the principles of medical ethics, professional behaviour, and the legal framework to the context within which Paramedics operate while maintaining personal health, wellness and safety.
2. Demonstrate knowledge of the structure and function of Emergency Medical Service (EMS) systems in South Africa and how they relate to the broader health care structures within the country.
3. Care for and operate medical and rescue equipment and resources required to render emergency care and rescue within the Paramedic scope of practice.
4. Perform appropriate clinical assessment, diagnostics skills and interventions within the Paramedic scope of practice.

### **HS4.2.3**      **Rules of access and admission requirements**

The minimum entry requirement is the National Senior Certificate with appropriate module combinations and levels of achievement as defined in the Minister's policy. Minimum Admission Requirements for Higher Certificate, Diploma and Bachelor's Degree Programmes Requiring a National Senior Certificate, Government Gazette, Vol. 482, 27961, 18 August 2005.

In addition to adherence to the University's student admission policy, the Department has the following requirements:

1. The minimum admission requirement is a Senior Certificate with university exemption, or an equivalent (NQF Level 4) achievement, as determined by a status committee, with the following subject combinations and symbols:
  - 1.1 Biology or Physiology with at least a Higher Grade D or Standard Grade C symbol.
  - 1.2 Physical Science with at least a Higher Grade D or Standard Grade C symbol.
  - 1.3 Mathematics with at least a Higher Grade D or Standard Grade C symbol.

### For applicants who obtained a Grade 12 during or after 2008:

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
26	5	4	Not accepted	4	4

### Selection criteria

Selection will be based on:

- academic merit; APS
- a structured personal interview;
- a phobia evaluation;
- medical examination;
- physical fitness and swimming proficiency evaluation;
- an English proficiency evaluation;
- previous appropriate experience (a recommendation).

### HS4.2.4 Pass requirements

1. Students may graduate once they have passed all the modules.
2. Due to the integrated nature of certain modules, individual credits are NOT retained unless all are passed within the same academic year. This ruling applies to the following modules:

1 <sup>st</sup> year	2 <sup>nd</sup> year
EMCTH11	EMCTH22
EMCPR11	EMCPR22
CLPR011	CLPR022

3. Students may enrol for a module in the following year, provided that:
  - 3.1 They have passed the prerequisite modules.
  - 3.2 The module selection does not lead to timetable clashes.
  - 3.3 In the case of Medical Rescue, the student has passed the physical preparedness module in the previous year of study.
4. If any of the modules within a particular year is failed, students need to register for and pass the physical preparedness module again.
5. First-year students must pass a minimum of 60% of the first-year modules to qualify for readmission to the programme.
6. 100% attendance of all theory lectures, practical, experiential or clinical components as well as tutorials is compulsory.
7. Students are granted full second-year status if they have passed all of the first-year modules.
8. Physical training is compulsory and in order to gain entry into medical rescue modules, students must successfully complete the physical preparedness evaluations.
9. Students may not register for the same module for a third time without permission

from the Head of Department and Executive Dean of the Faculty.  
10. Students have a maximum of four years to complete the qualification.

#### **HS4.2.5 Practical Training (Clinical learning)**

1. Students must, by the end of each year, complete the Clinical Learning requirements which are detailed in the relevant study guides in order to be granted a credit for the clinical practice modules.
2. Clinical practice is rostered at set periods during the academic year in conjunction with cooperative partners and cannot be personalised.
3. 100% attendance of all rostered shifts is compulsory. Students who miss shifts due to illness or injury will be required make up the missed shifts prior to the end of the academic year if they are to be granted a credit for the practical training modules.

#### **HS4.2.6 Specific rules and regulations for Emergency Medical Care students**

1. Students must familiarize themselves with the internal rules and regulations of the Department of Emergency Medical Care. These rules and regulations, as set out in the Departmental policy document, are binding.
2. 100% attendance of all theory lectures, practical, experiential, or clinical components as well as tutorials is compulsory.
3. Students who fail to attend theory classes will be requested to provide in writing reasons for their non-attendance.
4. The programme is not offered as a limited contact or distance- learning programme. Students who elect to leave the country will be unable to continue with their studies.
5. All students (even if not registered for Clinical Practice within that academic year) are required to see a minimum number of patients each year as determined by the department whilst they are registered. This is a requirement to ensure that clinical competencies are retained.
6. All registered students are required to attend physical training sessions as rostered.
7. Students may not register for a third time for the same module unless allowed by the Head of Department and Executive Dean of the Faculty.
8. Students are required to adhere to the requirements of the department relating to uniform and personal appearance.
9. Students have maximum of 4 years to complete the two-year diploma.

#### **HS4.2.7 Curriculum**

All modules are Continuous Evaluation modules.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Basic Sciences: Physics 1A	PHY1DA1	
End User Computing	ENUC011	
<b>Semester two</b>		
Basic Sciences: Chemistry	CET1DB1	



Mental Health and Wellness	MHAW011	
<b>Year modules</b>		
Foundations of Professional Practice	FOPP011	
Emergency Medical Care 1 Theory	EMCTH11	
Emergency Medical Care 1 Practical	EMCPR11	
Clinical Practice 1	CLPR011	
Anatomy 1	ANAT011	
Physiology 1	PHYS011	
Physical Preparedness 1	PHPR011	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year modules</b>		
Emergency Medical Care 2 Theory	EMCTH22	PHY1DA1, ENUC011 CET1DB1, MHAW011 FOPP011, EMCTH11 EMCPR11, CLPR011 ANAT011, PHYS011
Emergency Medical Care 2 Practical	EMCPR22	
Clinical Practice 2	CLPR022	
Primary Health Care	PRHC022	
High Angle 1	HIAN022	All first-year modules must be passed.
Fire Search & Rescue	FSAR022	
Motor Vehicle Rescue	MOVR022	
Physical Preparedness 2	PHPR022	

#### **HS4.3**      **ADVANCED CERTIFICATE IN MEDICAL RESCUE (C9AMRQ)**

**Mode of Offering: Contact One Year Programme**

**Duration of programme**

**Offered Part-Time: Minimum 2 years and Maximum 3 years**

**NQF Level 6, 147 Credits**

##### **HS4.3.1      Purpose**

This programme is designed to equip graduates with the required knowledge, skills and attributes to function as Medical Rescue Technicians. Medical Rescue Technicians will function within the emergency care profession of the South African healthcare system. These professionals will have the technical and cognitive ability necessary to operate at urban, rural and aquatic rescue incidents. Medical Rescue Technicians will promote a multi-disciplinary approach to effective, efficient rescue techniques with the patients' needs being central to the rescue operation.

##### **HS4.3.2      Outcomes**

1. Articulate a meaningful understanding of the over-arching principles and generic phases of a rescue including the role and function of rescue personnel, rescue services, incident command systems and applicable legislation within the South African context.
2. Apply the principles and theories of basic sciences underpinning rescue activities.
3. Conduct operational routines including the identification, inspection, preparation, operation, maintenance and storage of equipment, vehicles and other resources required to provide safe and effective rescue services.
4. Demonstrate appropriate levels of physical fitness, emotional stability, endurance, teamwork, and leadership required for the effective rendering of rescue in austere environments.
5. Demonstrate the ability to safely construct and operate rope rescue systems used to access, package, treat and extricate victims in a range of contexts including, urban, rural, industrial, wilderness and aquatic settings.
6. Perform and participate in search and rescue activities within a range of contexts including, urban, rural, industrial, wilderness and aquatic settings.

##### **HS4.3.3      Rules of Access and Admission Requirements**

This is a qualification for individuals who are already registered as health care professionals. Applicants will be required to provide proof that they are registered with the Health Professions Council (HPCSA) of South Africa or similar registering authority in the case of international applicants.

In addition, applicants would need to also hold an applicable recognised NQF level 5 or other higher education qualification in emergency medical care that facilitates their articulation and access into the Advanced Certificate in Medical Rescue. Applicants may enter the programme using the UJ's RPL criteria.

##### **HS4.3.4      Selection criteria**

To register for the qualification, the candidate must meet or exceed all the requirements indicated below:

The applicant with a Senior Certificate (prior to 2009) with University exemption, or its equivalent (NQF Level 4), as determined with an M-Score of 10 and at least a minimum of an E symbol on Higher Grade or a D symbol on Standard Grade pass for the following subjects:

- English
- Mathematics
- Biology/Physiology or
- Physical Science

The applicant with a National Senior Certificate with a Diploma endorsement must have the following subjects and rating codes:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
21	4	4	Not accepted	4	4

In addition to the above applicants must undergo structured interview, a South African Civil Aviation Authority (SACAA) Class II Cabin Crew Medical Assessment (or equivalent), physical fitness assessment (including swimming proficiency), acrophobia and claustrophobia testing and an English language proficiency assessment prior to registration.

Recognition of Prior Learning (RPL) will be applied on an individual basis against the exit-level outcomes of the programme on a case-by-case basis and will be conducted in accordance with the UJ's RPL Policy and Professional Board requirements.

#### HS4.3.5 Pass requirements

1. Students must pass all components of the module(s) to obtain credit for the module(s).
2. Students may graduate once they have passed all of the modules.
3. The Physical Preparedness module will be considered a co-requisite for any registered student, regardless of having passed the module in the prior academic semester or year.
4. Students must pass a minimum of 50% of the modules to qualify for readmission to the programme.
5. Students may not register for the same module for a third time without permission from the Head of Department and Executive Dean of the Faculty.
6. A range of assessment strategies and weightings, as laid out in the relevant module's learning guide, explains the continuous assessment criteria specified for promotion to the next year of study.

### HS4.3.6 Curriculum

All modules are Continuous Evaluation modules.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Basic Sciences: Physics 1A	PHY1DA1	
<b>Semester two</b>		
Basic Sciences: Chemistry 1B	CET1DB1	
<b>Year Modules</b>		
Physical Preparedness	PHP01Y1	
Communications in the Rescue Environment	CRE01Y1	
Foundations of Rescue Practices	FRP01Y1	
High Angle Rescue	HAR01Y1	
Rescue Technologies and Equipment	RTE01Y1	
<b>Second year</b>		
<b>Year modules</b>		
Rural and Wilderness Rescue Operations	RWR02Y2	PHY1DA1 CET1DB1 CRE01Y1 FRP01Y1 HAR01Y1 RTE01Y1 PHP01Y1
Urban Rescue Operations	URO02Y2	PHY1DA1 CET1DB1 CRE01Y1 FRP01Y1 HAR01Y1 RTE01Y1 PHP01Y1
Physical Preparedness 1B	PHP02Y2	PHP01Y1

## **HS4.4      BACHELOR OF HEALTH SCIENCES IN EMERGENCY MEDICAL CARE (B9E01Q)**

### **Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

### **HS4.4.1      Purpose**

The purpose of this qualification is to develop an Emergency Care Practitioner competent in the clinical knowledge and skills required for the emergency medical care and medical rescue profession.

The graduate will be able to competently apply an integration of theoretical principles, proven techniques, practical experience and appropriate clinical skills in order to:

- Provide an independent specialised emergency medical care and rescue service to all sectors of the community.
- Demonstrate skills in management and research working independently and in a supervisory capacity within emergency services and the healthcare team.
- Become a reflective practitioner and lifelong student within the emergency medical care profession.
- Successful completion of this qualification will entitle the student to register with the Health Professions Council of South Africa as an Emergency Care Practitioner.

### **HS4.4.2      Outcomes**

1. Demonstrate effective communication and apply the principles of medical ethics, professional behaviour, and the legal framework to the context within which emergency care practitioners operate while maintaining physical fitness, personal health, wellness and safety.
2. Provide and facilitate emergency medical care to all sectors of the community utilising specialised clinical strategies and technologies.
3. Perform medical rescue in a wide range of contexts.
4. Provide in-service training in emergency medical care and rescue.
5. Demonstrate an understanding of the structure and functioning of Emergency Medical Service (EMS) systems in South Africa including the provision of operational and clinical supervision within an emergency medical and rescue service.
6. Develop research skills, participate and conduct research in emergency medical care and rescue.

### **HS4.4.3      Rules of access and admission requirements**

#### **For applicants who obtained a Grade 12 prior to 2008:**

1. A Senior Certificate with university exemption or an equivalent qualification at an equivalent standard, as determined by a Status Committee, with 2 of the following modules:
  - 1.1 Biology or Physiology with at least a Higher Grade D or Standard Grade C symbol.
  - 1.2 Physical Science with at least a Higher Grade D or Standard Grade C symbol.
  - 1.3 Mathematics with at least a Higher Grade D or Standard Grade C symbol.

#### **For applicants who obtained a Grade 12 during or after 2008:**

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
26	5	4	Not accepted	4	4

### Selection criteria

Selection will be based on:

- academic merit;
- a structured personal interview;
- a phobia evaluation;
- passing of a Class II Aviation or equivalent medical examination;
- a physical preparedness evaluation;

Evidence of community service and or previous appropriate experience is a recommendation.

### HS4.4.4 Pass requirements

1. Due to the integrated nature of certain modules, individual credits are NOT retained unless all are passed within the same academic year. This ruling applies to the following modules:

1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
EMC01Y1	EMC01Y2	EMC01Y3	EMC01Y4
EMC02Y1	EMC02Y2	EMC02Y3	EMC02Y4
EMC03Y1	EMC03Y2	EMC03Y3	EMC03Y4
PFP01Y1	PFP02Y2	PFP03Y3	PFP04Y4

2. Students may enrol for a module in the following year, provided that:
  - 2.1 They have passed the prerequisite modules.
  - 2.2 The module selection does not lead to timetable clashes.
  - 2.3 In the case of Medical Rescue, the student has passed the fitness and swimming proficiency assessment.
3. First-year students must pass a minimum of 60% of the first-year modules to qualify for readmission to the programme.
4. 100% attendance of all theory lecturers, practical, experiential or clinical components as well as tutorials is compulsory.
5. Students who fail to attend theory classes will be requested to provide in writing reasons for their non-attendance.

### HS4.4.5 Clinical practice (Work integrated learning)

1. Students must, by the end of each year, complete the requirements which are detailed in the EMC 1, 2, 3 and 4 Study Guides.
2. Clinical Learning and rescue practical are integrated into the academic programme in conjunction with cooperative education and training partners, for this reason, shift rosters cannot be personalized.
3. Due to the nature of emergency medical care and rescue work students registering for this programme may be required to work after-hours, weekends and over

religious holidays. We are regretfully unable to cater for individual requests not to work on certain days and times.

#### HS4.4.6 Specific rules and regulations for Emergency Medical Care students

1. Students must familiarize themselves with the internal rules and regulations of the Department of Emergency Medical Care. These rules and regulations, as set out in the Departmental policy document, are binding.
2. The programme is not offered as a limited contact or distance- learning programme. Students who elect to leave the country will be unable to continue with their studies.
3. All students (even if not registered for Clinical Practice within that academic year) are required to see a minimum number of patients each year as determined by the department whilst they are registered. This is a requirement to ensure that clinical competencies are retained.
4. All registered students are required to attend physical training sessions as rostered.
5. Students may not register for a third time for the same module.
6. Students are required to adhere to the requirements of the department relating to uniform and personal appearance.
7. Students have maximum of 6 years to complete the four-year degree.

#### HS4.4.7 Curriculum

All modules are Continuous Evaluation modules.

First year		
Module name	Module code	Prerequisite code
Semester one		
Computing Literacy	CSL01A1	
Basic Science: Physics	PHB1AA1	
Semester two		
Basic Science: Chemistry	CHB1BB1	
Mental Health and Wellness	MHW1BB1	
Year modules		
Emergency Medical Care 1 Theory	EMC01Y1	
Emergency Medical Care 1 Practical	EMC02Y1	
Clinical Practice 1	EMC03Y1	
Foundations of Professional Practice	FPP01Y1	
Anatomy 1	ANT01Y1	
Physiology 1	PHY01Y1	
Physical Preparedness 1	PFP01Y1	
Second year		

Module name	Module code	Prerequisite code
<b>Semester two</b>		
Primary Health Care 2	PHC01B2	
<b>Year modules</b>		
Emergency Medical Care 2 Theory	EMC01Y2	EMC01Y1 EMC02Y1
Emergency Medical Care 2 Practical	EMC02Y2	EMC03Y1 PHY01Y1 CHB1BB1
Clinical Practice 2	EMC03Y2	ANT01Y1 MHW1BB1 CSL01A1
Diagnostics 1	EMC04Y2	FPP01Y1 PHB1AA1
High Angle 1	HAR01Y2	EMC01Y1 EMC02Y1
Fire Search & Rescue 1	FSR01Y2	EMC03Y1 PHY01Y1
Motor Vehicle Rescue	MVR01Y2	CHB1BB1 PFP01Y1
Industrial & Agricultural Rescue	IAR01Y2	PHB1AA1
Physiology 2	PHY02Y2	ANT01Y1 PHY01Y1
General Pathology 1	GPA01Y2	EMC01Y1 EMC02Y1 EMC03Y1 ANT01Y1 PHY01Y1
Physical Preparedness 2	PFP02Y2	PFP01Y1
<b>Third year</b>		
Module name	Module code	Prerequisite code
<b>Year modules</b>		
Emergency Medical Care 3 Theory	EMC01Y3	EMC01Y2 EMC02Y2
Emergency Medical Care 3 Practical	EMC02Y3	EMC03Y2 PHC01B2 PHY02Y2
Clinical Practice 3	EMC03Y3	GPA01Y2
High Angle 2	HAR02Y3	HAR01Y2 FSR01Y2
Wilderness Search and Rescue	WSR01Y3	MVR01Y2 IAR01Y2
Aviation Rescue	AVR01Y3	PFP02Y2 EMC01Y2



Aquatic Rescue	AQR01Y3	EMC02Y2 EMC03Y2
Pharmacology 1	PHA01Y3	EMC01Y2 EMC02Y2 EMC03Y2 EMC04Y2 PHC01B2 PHY02Y2 GPA01Y2
Research Methodology EMC	RMT01Y3	EMC01Y2 EMC02Y2 EMC03Y3 EMC04Y4 GPA01Y2 PHY02Y2 PHC01B2
Physical Preparedness 3	PFP03Y3	PFP02Y2
<b>Fourth Year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year modules</b>		
Intensive and Specialized Care	EMC01Y4	EMC01Y3 EMC02Y3 EMC30Y3 PHA01Y3
Paediatric and Neonatal Emergency Care	EMC02Y4	
Clinical Practice 4	EMC03Y4	
Research Elective 4	REP01Y4	RMT01Y3 EMC01Y3
Educational Techniques	EDT01Y4	EMC01Y3 EMC02Y3 EMC03Y3
Emergency Service Administration	ESA01Y4	
Disaster Management	DIS01Y4	EMC01Y3 EMC02Y3 EMC03Y3
Confined Space Rescue	CSR01Y4	HAR02Y3 WSR01Y3 AVR01Y3 AQR01Y3 PFP03Y3 EMC01Y3 EMC02Y3 EMC03Y3
Hazardous Materials Rescue	HAZ01Y4	
Trench Rescue	TRR01Y4	
Structural Collapse Rescue	SCR01Y4	
Physical Preparedness 4	PFP04Y4	PFP03Y3

#### **HS4.5**      **POSTGRADUATE DIPLOMA IN CLINICAL SIMULATION (E9CSMO)**

**Mode of offering: Distance (Online) One Year Programme**

**Duration of programme**

**Offered Part-time: Minimum 2 years and maximum 3 years**

**NQF Level 8, Credits 124**

##### **HS4.5.1      Purpose**

The purpose of the PGDip Clinical Simulation is to develop health care educators who are skilled in the integration and application of clinical simulation theories and practises in their own teaching, learning, assessment, and research. This requires problem-solving skills and critical, reflective thinking, as well as the ability to report on clinical simulated teaching principles in ways appropriate to the relevant academic and disciplinary discourses. The graduate will be able to competently apply an integration of theoretical principles, proven techniques, practical experience, and appropriate skills into their own teaching practises.

##### **HS4.5.2      Outcomes**

1. Demonstrate a deep understanding of the development and application of simulation as a strategy for health care education.
2. Apply adult learning theories to the construction and application of simulation-based learning experiences.
3. Describe and critically appraise current simulation technologies and modalities with regard to their value and application.
4. Design and implement simulation-based learning experiences using appropriate teaching, learning and assessment strategies.
5. Describe the core principles associated with the management of simulation facilities and related resources.
6. Critically appraise research methodologies and approaches used in simulation contexts.

##### **HS4.5.3      Rules of access and admission requirements**

The minimum admission requirement is an appropriate Health Sciences related Bachelor's degree or Advanced Diploma or equivalent qualification (a minimum of an NQF level 7). The candidate should have experience in health professions education, with a minimum of 2 years' experience in their relevant field. This includes clinical or profession specific experience. Additionally, the candidate also needs access to a simulation laboratory/clinic where they will have the opportunity to conduct and participate in simulated activities. This may include conducting and participating in formal and non-formal simulation activities. Applicants would need to have access to hardware required to successfully navigate the online nature of the programme. This includes a laptop, tablet or desktop computer with suitable word processing applications and an internet connection. The use of Recognition of Prior Learning for access onto the programme will be considered provided this is in-line with the overall enrolment plan, related UJ and Council on Higher Education policies and procedures. International applicants will be assisted with application for the programme once a South African Qualifications Authority (SAQA) equivalency for their existing qualifications, is established.

##### **HS4.5.4      Selection criteria**

Once the minimum admission requirements are in place, applicants will apply via the UJ website. Once applications have been received by the Department, selection will be based on the candidates' prior experience and qualification. Experience in health

professions education would be advantageous. The selection will further be guided by the enrolment strategy of the Department and the Faculty.

#### HS4.5.5 Pass requirements

1. Students retain credits for all modules passed.
2. Students must pass all components of the module(s) to obtain credit for the module(s).
3. Students may graduate once they have passed all the modules.
4. Students must pass a minimum of 50% of the modules to qualify for readmission to the programme.
5. Students may not register for the same module for a third time without permission from the Head of Department and Executive Dean of the Faculty.
6. Students have a maximum of two years full-time and three years part-time to complete the qualification.
7. A range of assessment strategies and weightings, as laid out in the relevant module's learning guide, explains the continuous assessment criteria specified for promotion to the next year of study.

#### Curriculum

First year		
Module name	Module code	Prerequisite code
Semester one		
Adult Learning and Simulation Pedagogy	ASP01AO	
Introduction to Simulation	ITS01AO	
Semester two		
Clinical Simulation and Instructional Design	CSD01BO	
Simulation Technologies and Modalities	STM01BO	
Second year		
Facilities and Resource Management	FRM01AO	
Simulation and Research	SIR01AO	
Year Module		
Simulation Practices	SIP01YO	

## **HS4.6      MASTER OF EMERGENCY MEDICAL CARE (M9E01Q)**

**Duration of programme**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits**

**Research dissertation 100%**

### **HS4.6.1      Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to:

- Perform independent scientific research with an original component
- Contribute to knowledge of and insight into emergency medical care as well as the specific discipline of research
- Display skills in related research methodologies and in proper formulation through a master's dissertation
- Reflect upon decision-making, self-directedness and contributions to medical science.

### **HS4.6.2      Outcomes**

The student will be able to:

- Identify, formulate, prepare and solve research problems.
- Execute the research project at the appropriate level.
- Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
- Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
- Report research findings at the appropriate level.
- Make conclusions, suggestions and recommendations based on the data collected that are reasonable and justifiable.

### **HS4.6.3      Rules of access and admission requirements**

A 4-year Bachelor's Degree in Emergency Medical Care or an equivalent qualification at an equivalent standard as determined by a Status Committee and approved by the Faculty Board. Applications from persons with a BTech degree in Emergency Medical Care or equivalent qualifications will be considered by a constituted status committee in line with the Universities and Faculties regulations.

#### **Selection criteria**

Selection will be based on:

- Consideration of a research concept note
- Structured personal interview

The selection and allocation of postgraduate students depends on the availability of supervisors.

### **HS4.6.4      Pass requirements**

Students are assessed via submission of a dissertation in line with the Senate Higher Degrees Policy of the University.

#### HS4.6.5 Curriculum

A research project and a dissertation. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Dissertation: Emergency Medical Care	EMC9X01
<b>Semester two</b>	
Research Dissertation: Emergency Medical Care	EMC9X02

#### HS4.7 **DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: EMERGENCY MEDICAL CARE (P9H16Q)**

**Duration of programme**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

##### HS4.7.1 Purpose

The purpose of the Doctor of Philosophy: Emergency Medical Care Degree is to promote the career advancement of graduates in the field of emergency medical care by enabling students to conduct independent, novel research in emergency medical care.

This Doctoral Degree aims to provide members of the profession an opportunity to conduct independent original research through scientific discourse and independent investigation contributing to the development of the field of emergency medical care. The outcome of this field-specific Doctoral Degree is a comprehensive and systematic grasp of an in-depth body of knowledge in the field of emergency medical care with the development of specialist expert knowledge, thereby contributing to evidence based professional practice.

##### HS4.7.2 Outcomes

Demonstrate a systematic understanding of the field of Emergency Medical Care and a mastery of the skills and methods of research associated with the field of Emergency Medical Care. Demonstrate the ability to conceive, design and implement research with scholarly integrity. Make a contribution through original research that extends the frontier of knowledge by developing a substantial body of work in an area of Emergency Medical Care, some of which merits national or international refereed publication.

##### HS4.7.3 Rules of access and admission requirements

###### Prior learning

It is assumed that the student has specialist knowledge in research methodology and: Is knowledgeable about ethical considerations in relation to research in Emergency Medical Care.

Is competent in research proposal writing.

Is competent in report writing and dissemination.

Has expertise in the area to be investigated.

### **Access to the Qualification**

An appropriate Master's Degree in the field of Emergency Medical Care and Rescue is required. Alternatively, conferment of status may be granted through an internal evaluation process in alignment with institutional policies.

Applications from persons with an M Tech degree in Emergency Medical Care or equivalent qualifications will be considered by a constituted status committee in line with the Universities and Faculties regulations.

### **Selection criteria**

The selection of Doctoral students will be done in accordance with rules and regulations of the Higher Degrees Committee of the University of Johannesburg as stipulated for inter-disciplinary programmes:

Selection will be based on;

- Consideration of a research concept note

The selection and allocation of postgraduate students depends on the available.

#### **HS4.7.4 Pass requirements**

The final outcome of a thesis which is ratified in accordance with the post graduate policy approved by the Senate. The results are considered by the Faculty Higher Degrees Committee for approval, sent to Faculty Board for ratification and then to Senate Higher Degrees Committee for noting in accordance with the University's Higher Degrees and Postgraduate Studies Policy.

It is expected of the student, in collaboration with the supervisor, to submit a journal article for publication in accordance with UJ policy and procedures.

#### **HS4.7.5 Curriculum**

A research thesis. The research component is 100%.

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Emergency Medical Care)	REM10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Emergency Medical Care)	REM10X2

## **HS5.0      DEPARTMENT OF ENVIRONMENTAL HEALTH**

### **HS5.1      BACHELOR OF ENVIRONMENTAL HEALTH (B9ENV1)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

#### **HS5.1.1      Purpose**

The purpose of the BEH programme is to produce graduates who have a systematic and coherent body of knowledge to apply principles and practices of Environmental Health; the ability to access and evaluate scientific information and have a high level of analytical, cognitive and generic skills; To provide graduates opportunities for continued personal intellectual growth, advancing with postgraduate study, contributing to the social upliftment of society constructively; To provide society with graduates who demonstrate initiative and responsibility; be involve in science and research development; to transform the leadership base in South Africa and conduct themselves in a professional and ethical manner both in the workplace and society as required by the HPCSA.

#### **HS5.1.2      Outcomes**

1. Integrate and apply foundational, scientific principles and knowledge to Environmental Health sciences. [Range of scientific principles and knowledge includes, but is not limited to Chemistry, Microbiology, Physics, Mathematics, Ecology/Geology, Anatomy and Physiology (human and animal), Sociology and Anthropology];
2. Manage Environmental Health programmes that are not limited to environmental health risks, health impact assessments but rather on the prevention, promotion within natural, socio-economic, built and working environments within the scope of the profession. [Range: manage refers to: design, develop, implement and evaluate];
3. Demonstrate project management skills within a project management life-cycle;
4. Conduct and participate in Environmental Health research.
5. Demonstrate interpersonal relations and professional behavior in terms of the ethical code.

#### **HS5.1.3      Rules of access and admission requirements**

1. The admission requirements for this programme will adhere to the University of Johannesburg's Policy for Admission and Selection, which is current at the time of the inception of this programme.
2. A Senior Certificate or an equivalent qualification at an equivalent standard as determined by a Faculty Status Committee, with the following Subjects:

Mathematics at NQF Level 4: NSC achievement rating of (50-59%)

Life Sciences at NQF Level 4: NSC achievement rating of (50-59%)

Physical Science at NQF Level 4: NSC achievement rating of (50-59%).

Any other two (2) subjects at level 4

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
24	4	4	Not accepted	4	4

#### HS5.1.4 Curriculum

<b>First year</b>		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Biochemistry	BICH1A1	
Sociology 1A	SOC1AA1	
Sustainability Development & Ecology	SDEEH01	
Introduction to Environmental Health	ITENV01	
Computer Literacy	CSL01A1	
<b>Year modules</b>		
Chemistry	CETH1Y1	
Physics	PHBH1Y1	
Anatomy & Physiology	APENV01	
Microbiology	MCBH1Y1	
Applied Communications Skills	COM1001	
<b>Second year</b>		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Research Methodology: Module A	RMENVA2	SOC1AA1 CSL01A1
<b>Year modules</b>		
Planning for Built Environment	PFBEE02	SDEEH01
Food and Meat Hygiene	FMHEEH0	APENV01 MCBH1Y1



Infectious Disease Epidemiology	IDEEH02	MCBH1Y1
Community Development 1	CDENV02	COM1001 SOC1AA1
Environmental Pollution: Water, Waste and Air	EPWWA02	SDEEH01 ITENV01
Occupational Health and Safety: Physical Stress	OHSPS02	CETH1Y1 PHBH1Y1 APENV01
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester One</b>		
Research Methodology: Biostatistics	RMBEHB3	RMENVA2
<b>Year Modules</b>		
Environmental Epidemiology	EEENV03	IDEEH02
Environmental Health Management and Administration	EHMAA03	CDENV02
Food Processing and Safety	FPSEH03	FMHEEH0
Occupational Health and Safety: Chemical / Biological	OHSCB03	OHSPS02
Water Quality and Waste Management	WQAWM03	EPWWA02
<b>Fourth year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Air Quality Management	AQMEH04	WQAWM03
Disaster Management	DMENV04	FPSEH03 EEENV03
Management Practice	MPENV04	EHMAA03
Environmental Management (NEMA & EMI)	EMNME04	OHSCB03 WQAWM03
Food Safety Management	FSMEH04	
Occupational Health and Safety: Management Systems	OHSMS04	OHSCB03
Research Project	RPENV04	RMBEHB3
Water Quality and Waste Management	WQAWM04	WQAWM03

## **HS5.2      MASTER OF HEALTH SCIENCES: ENVIRONMENTAL HEALTH (M9EH1Q)**

### **Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF level 9**

**Research dissertation 100%**

### **HS5.2.1      Purpose**

To provide students with the knowledge and skills to conduct independent research through advanced scientific problem solving skills, and the application of critical and reflective thinking in the field of Environmental Health. The qualification is intended for persons who will contribute to knowledge generation through independent research to develop and advance the profession of Environmental Health.

### **HS5.2.2      Outcomes**

On completion of these programme the student will be able to apply scientific research, problem-solving, analytical, critical thinking and reflective skills to perform research and compile a research dissertation in a chosen field of specialisation within Environmental Health.

### **HS5.2.3      Rules of access and admission requirements**

A Bachelor's Degree in Environmental Health at NQF level 8 with an average of 65% or an equivalent qualification at an equivalent standard as determined by the Departmental Research Committee and approved by the Faculty Board. Submission of a draft proposal to the Departmental Research Committee and approval thereof is required in addition to the online application. The selection and allocation of postgraduate students depends on the availability of supervisors.

#### **Selection criteria**

Selection is based on approval by the Departmental Research Committee.

### **HS5.2.4      Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

### **HS5.2.5      Curriculum**

A research project and a dissertation:

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Dissertation: Health Sciences (Environmental Health)	DEH9XA1
<b>Semester two</b>	
Research Project and Dissertation: Health Sciences (Environmental Health)	DEH9XB1

**HS5.3      MASTER OF PUBLIC HEALTH (M9EN2P)**  
**Online Programme**  
**Duration of programme**  
**E-Learning: Minimum 2 years and maximum 3 years**  
**NQF Level 9, 180 Credits**  
**Course work 70% and minor dissertation 30%**

**HS5.3.1      Purpose**

The purpose of the programme is to qualify health professionals who at the end of the programme will have been empowered to analyse, strategize and offer solutions to challenges faced by Sub-Saharan countries including South Africa with respects to Environmental and Occupational threats and risks.

**HS5.3.2      Outcomes**

**On completion of this programme students will be able to:**

1. Contextualise Public Health within the region and relevant countries' health systems, with specific focus on environmental and occupational health.
2. Conduct health risk assessments and to enumerate, understand, mitigate and manage these risks.
3. Develop relevant epidemiology and research methodologies for local, regional environmental and occupational health risks.
4. Develop a knowledge of related health economies.
5. Unpack environmental and occupational disasters that have local and regional relevance as learning opportunities in primary, secondary and tertiary prevention situations.
6. Take strategic decisions within the context of environmental and occupational health domains.

**HS5.3.3      Rules of access and admission requirements**

The minimum admission requirement is a Bachelor's Degree at NQF 8 in a related Health Field e.g Environmental Health, Epidemiology, MBChB, Social Work, Physiotherapy, Nursing and other related equivalent qualification. Three to five years' work experience in the Health sector inclusive of management position, research and/or project management. Applications from persons with equivalent qualifications will be considered by a constituted status committee in line with the University's and Faculty's regulations.

**Selection criteria**

Selection is based on approval by the Faculty and programme co-ordinator. The selection of Master's students will be done in accordance with rules and regulations of the Higher Degrees Committee of the University of Johannesburg as stipulated for inter-disciplinary programmes.

**HS5.3.4      Pass requirements**

Successful completion of the course work modules and minor dissertation. The MPH will only be offered on a part time basis over 2 years minimum and 3 years maximum.

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code / Exposure module</b>
Principle and Practice of Environmental Health A	PPECAP1	
Principle and Practice of Environmental Health B	PPECBP1	PPECAP1 (pre-requisite)
Environmental Epidemiology, Biostatistics and Research Methodologies A	EEBCAP1	PPECAP1 (pre-requisite)
Environmental Epidemiology, Biostatistics and Research Methodologies B	EEBCBP1	PPECAP1 (exposure module) EEBCAP1 (exposure module)
Health Promotion and Health Behaviour	HPBC2P1	PPECAP1 (exposure module)
Environmental Health Risk and Impact Assessment	EHRC2P1	PPECAP1 (exposure module)
Emerging National and Continental Environmental Health Challenges	ENCC2P1	PPECAP1 (exposure module)
African Health System, Health and Environmental Politics and Management	AHSC2P2	PPECAP1 (exposure module)
Health Systems, Funding Modules and Health Economics	HSFC2P2	PPECAP1 (exposure module)
Minor-Dissertation: A	EMDCAP2	PPECBP1 (pre-requisite) EEBCAP1 (pre-requisite)
Minor-Dissertation: B	EMDCBP2	EMDCAP2 (pre-requisite)
Minor-Dissertation: C	EMDCCP2	EMDCBP2 (pre-requisite)
Minor-Dissertation: D	EMDCDP2	EMDCCP2 (pre-requisite)
Minor-Dissertation: E	EMDCEP2	EMDCDP2 (pre-requisite)
Minor-Dissertation: F	EMDCFP2	EMDCEP2 (pre-requisite)
Minor-Dissertation: G	EMDCGP2	EMDCFP2 (pre-requisite) EEBCBP1 (pre-requisite)

Minor-Dissertation: H	EMDCHP2	EMDCGP2 (pre-requisite)
Minor-Dissertation: I	EMDCIP2	EMDCHP2 (pre-requisite)

#### **HS5.4      DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: ENVIRONMENTAL HEALTH (P9HS3Q)**

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

##### **HS5.4.1      Purpose**

The purpose of this qualification is to provide qualifying students with analytical specific problem solving and reflective competencies at an advanced academic level culminating in the production of a thesis in the field of Environmental Health.

##### **HS5.4.2      Outcomes**

1. The student will be able to apply high-level critical thinking, reflective and research skills in order to perform research in the specialised area of Environmental Health.
2. The student will be able to conceptualise new research initiatives and new knowledge in the field of Environmental Health.

##### **HS5.4.3      Rules of access and admission requirements**

A Master's degree with an average of 65% in Environmental Health or an equivalent qualification at an equivalent standard as determined by the Departmental Research Committee and approved by the Faculty Board. Submission of a draft proposal to Departmental Research Committee and approval thereof is required in addition to the online application. The selection and allocation of postgraduate students depends on the availability of supervisors.

##### **Selection criteria**

Selection is based on academic merit and on approval by the Departmental Research Committee

##### **HS5.4.4      Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

##### **HS5.4.5      Curriculum**

A research thesis. The research component is 100%.

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Environmental Health)	REH10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Environmental Health)	REH10X2

**HS5.5 DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: PUBLIC HEALTH (P9HS6Q)****Duration of programme****Full-time: Minimum 2 years and Maximum 4 years****Part-time: Minimum 2 years and Maximum 5 years****NQF level 10, 360 Credits****Research thesis 100%****HS5.5.1 Purpose**

The purpose of this qualification is to provide qualifying students with advanced analytical, problem solving and reflective competencies as specialist in Public Health culminating in the production of a thesis and publications in Public Health.

**HS5.5.2 Outcomes**

1. The student will be able to apply high-level critical thinking, reflective and research skills in order to perform research in the specialised area of Environmental Health.
2. The student will be able to make an original contribution to the knowledge content of the discipline of Public Health through independent research.

**HS5.5.3 Rules of access and admission requirements**

A Master's Degree with an average of 65% in Public Health or an equivalent qualification at an equivalent standard as determined by the Departmental Research Committee and approved by the Faculty Board. Submission of a draft proposal to Departmental Research Committee and approval thereof is required in addition to the online application. The selection and allocation of postgraduate students depends on the availability of supervisors.

**Selection criteria**

Selection is based on academic merit and on approval by the Departmental Research Committee.

**HS5.5.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg

**HS5.5.5 Curriculum**

A research thesis. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Public Health)	RPH10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Public Health)	RPH10X2

## **HS6.0**      **DEPARTMENT OF HUMAN ANATOMY AND PHYSIOLOGY**

### **HS6.1**      **MASTER OF HEALTH SCIENCES: HUMAN PHYSIOLOGY (M9HA1Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF level 9; 180 Credits**

**Research thesis 100%**

#### **HS6.1.1**      **Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to perform independent scientific research and contribute to the knowledge of and in Human Physiology through the specific discipline of research.

#### **HS6.1.2**      **Outcomes**

At the end of the qualification, the student will be able to:

1. Reflect upon, identify, formulate, prepare and solve research problems related to Human Physiology.
2. Execute a research project at the appropriate level by applying related research methodologies and in the proper formulation and submission of a Master's dissertation
3. Acquire learning research competencies and abilities including the critical assessment of scientific literature, the execution of research methodologies including data gathering, its evaluation and reporting and the reasonable and justifiable argument of conclusions and future research recommendations based on the research project undertaken.

#### **HS6.1.3**      **Rules of access and admission requirements**

An Honours qualification in Human Physiology (NQF Level 8) or an equivalent qualification at an equivalent standard as determined by a Status Committee and approved by the Faculty Board.

##### **Selection criteria**

Selection will be based on:

- Consideration of a draft proposal after discussion with a potential identified supervisor
- Prior academic performance.

#### **HS6.1.4**      **Pass requirements**

Students are assessed via submission of a dissertation in line with the Senate Higher Degrees Policy and Postgraduate Administration Processes Policies of the University.

#### **HS6.1.5**      **Curriculum**

A research project and a thesis:

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Dissertation: Health Sciences (Human Physiology)	DHA9XA1
<b>Semester two</b>	
Research Project and Dissertation: Health Sciences (Human Physiology)	DHA9XB1

## **HS6.2**      **MASTER OF HEALTH SCIENCES: HUMAN ANATOMY (M9AT1Q)**

### **Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF level 9; 180 Credits**

**Research thesis 100%**

### **HS6.2.1**      **Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to perform independent scientific research and contribute to the knowledge of and in Human Anatomy through the specific discipline of research.

### **HS6.2.2**      **Outcomes**

At the end of the qualification, the student will be able to:

1. Reflect upon, identify, formulate, prepare and solve research problems related to Human Anatomy.
2. Execute a research project at the appropriate level by applying related research methodologies and in the proper formulation and submission of a Master's dissertation
3. Acquire learning research competencies and abilities including the critical assessment of scientific literature, the execution of research methodologies including data gathering, its evaluation and reporting and the reasonable and justifiable argument of conclusions and future research recommendations based on the research project undertaken.

### **HS6.2.3**      **Rules of access and admission requirements**

An Honours qualification in Human Anatomy (NQF Level 8) or an equivalent qualification at an equivalent standard as determined by a Status Committee and approved by the Faculty Board.

#### **Selection criteria**

Selection will be based on:

- Consideration of a draft proposal after discussion with a potential identified supervisor
- Prior academic performance.

### **HS6.2.4**      **Pass requirements**

Students are assessed via submission of a dissertation in line with the Senate Higher Degrees Policy and Postgraduate Administration Processes Policies of the University

### **HS6.2.5**      **Curriculum**

A research project and a thesis:

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Dissertation: Health Sciences (Human Anatomy)	DAT9XA1
<b>Semester two</b>	
Research Project and Dissertation: Health Sciences (Human Anatomy)	DAT9XB1



**HS6.3 DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: HUMAN PHYSIOLOGY (P9H15Q)**

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

**HS6.3.1 Purpose**

The primary purpose of this qualification is to provide the qualifying student with advanced critical, analytical, problem-solving and reflective competencies in order to make an original, novel contribution to the knowledge content of the Human Physiology through independent research.

**HS6.3.2 Outcomes**

At the end of the qualification, candidates should:

1. Have a thorough knowledge of the literature and a comprehensive understanding of the scientific techniques applicable to their research.
2. Be able to critically evaluate current research and implement current research techniques.
3. Be able to act autonomously in the creation, implementation and interpretation of research in their field.

**HS6.3.3 Rules of access and admission requirements**

The minimum admission requirement is the possession of an MSc in Human Physiology with a programme specific minimum level of competency on NQF Level 9, generating a minimum of 180 credits.

**HS6.2.4 Pass requirements**

1. Students are assessed via submission of a thesis in line with the Senate Higher Degrees Policy and Postgraduate Administration Processes Policies of the University.
2. The doctoral examination will be written and will deal with the content of a submitted thesis, as well as those subdivisions of the field of study on which the thesis is based, if requested.
3. It is expected of the candidate, in collaboration with the supervisor, to have prepared for publication two (2) manuscripts in a ready to submit format, in accordance with UJ policy and procedures.

**HS6.2.5 Curriculum**

A research project and a thesis:

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Human Physiology)	RHP10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Human Physiology)	RHP10X2

## **HS6.4** **DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: HUMAN ANATOMY (P9HS9Q)**

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

### **HS6.4.1 Purpose**

The primary purpose of this qualification is to provide the qualifying student with advanced critical, analytical, problem-solving and reflective competencies in order to make an original, novel contribution to the knowledge content of the Human Anatomy through independent research.

### **HS6.4.2 Outcomes**

At the end of the qualification, candidates should:

1. Have a thorough knowledge of the literature and a comprehensive understanding of the scientific techniques applicable to their research.
2. Be able to critically evaluate current research and implement current research techniques.
3. Be able to act autonomously in the creation, implementation and interpretation of research in their field.

### **HS6.4.3 Rules of access and admission requirements**

The minimum admission requirement is the possession of an MSc in Human Anatomy with a programme specific minimum level of competency on NQF Level 9, generating a minimum of 180 credits.

### **HS6.4.4 Pass requirements**

1. Students are assessed via submission of a thesis in line with the Senate Higher Degrees Policy and Postgraduate Administration Processes Policies of the University.
2. The doctoral examination will be written and will deal with the content of a submitted thesis, as well as those subdivisions of the field of study on which the thesis is based, if requested.
3. It is expected of the candidate, in collaboration with the supervisor, to have prepared for publication two (2) manuscripts in a ready to submit format, in accordance with UJ policy and procedures.

### **HS6.4.5 Curriculum**

A research project and a thesis:

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Human Anatomy)	RHA10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Human Anatomy)	RHA10X2

## **HS7.0      DEPARTMENT OF MEDICAL IMAGING AND RADIATION SCIENCES (MIRS)**

### **HS7.1      BACHELOR OF DIAGNOSTIC RADIOGRAPHY (B9M01Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

**Work integrated learning (WIL) is incorporated into the employment contract with the respective clinical training centre.**

#### **HS7.1.1      Purpose**

The purpose of this qualification is to develop a competent professional, who has thorough grounding in the knowledge and skills required for Diagnostic Radiography and who has gained experience in applying such knowledge and skills in accredited workplaces.

Successful completion of this qualification will entitle the student to register with the Health Professions Council of South Africa (HPCSA) as a Diagnostic Radiographer.

#### **HS7.1.2      Outcomes**

After completion of the programme, the student will be able to:

1. Perform routine and specialized radiographic procedures to produce images of diagnostic quality.
2. Access, organize and present information applicable to the radiography context in order to record, retrieve and communicate patient data.
3. Evaluate the quality of routine and specialized radiographic images and perform image interpretation to identify normal and abnormal appearances.
4. Plan, develop and apply total quality management appropriate to the diagnostic radiography context.
5. Perform safe and effective patient care in accordance with the patient's needs and departmental protocol to provide a quality service and to maintain the welfare of the patient.
6. Apply the principles of human rights, ethics and relevant medical law which ensure the well-being of the patient.
7. Apply the principles, specific knowledge, skills and values related to one of the chosen electives as listed.
8. Conduct research.

#### **HS7.1.3      Rules of access and admission requirements**

A Senior Certificate or an equivalent qualification at an equivalent standard as determined by a Faculty Status Committee, with the following Subjects:

- Mathematics with a Higher Grade D or Standard Grade C symbol.
- Physical Science with a Higher Grade D or Standard Grade C symbol.
- Biology with a Higher Grade C or Standard Grade B symbol or,
- Physiology with a Higher Grade C or Standard Grade B symbol.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
31	5	4	Not accepted	4	5

### Selection criteria

Selection will be based on:

- Academic merits;
- Clinical placement in a Health Professional Council of South Africa accredited clinical training site.

### HS7.1.4 Pass requirements

1. Students retain credits for all modules passed except where requirement 2 applies;
2. If a student fails any module in any level of study, he/she forfeits the credits for the Diagnostic Clinical Practice Module for that level of study but retain credits for all other modules passed.
3. Students may enrol for a module in the following year of study provided that they have passed the prerequisite module/s.
4. Students may not register for module combinations that lead to timetable clashes. The Department will make the final decision as to the modules for which the student may register.
5. Students are promoted:
  - 5.1 to the second year of study if they have passed all the first-year modules.
  - 5.2 to the third year of study if they have passed all the second-year modules.
  - 5.3 to the fourth year of study if they have passed all the third-year modules.
6. To be admitted to any module in the second or third academic year of study, and progress to the following year of study, students must have passed at least 60% of the modules in the previous year of study.
7. Students must pass at least 3 out of the 7 modules in the first year of study in order to qualify for readmission to the first year of study.
8. A range of assessment strategies and weightings, as laid out in the relevant module's learning guide, explains the continuous assessment criteria specified for promotion to the next year of study.

### HS7.1.5 Specific rules and regulations for Medical Imaging and Radiation Sciences students

1. Students must familiarize themselves with the internal rules and regulations of the Department of Medical Imaging and Radiation Sciences. These rules and regulations, as set out in the Departmental policy document, are binding.
2. The programme is not offered as a limited contact or distance learning programme. Students who elect to leave the country will be unable to continue with their studies.
3. All students are required to complete a minimum number of clinical hours / competencies as stipulated by the HPCSA at the time.

## HS7.1.6 Curriculum

All modules are Continuous Evaluation modules.

All modules are Continuous Evaluation modules.		
First year		
Module name	Module code	Prerequisite code
Year Modules		See admission requirements
Anatomy and Physiology 1	ANP01Y1	
Applied Physics	APP01Y1	
Diagnostic Clinical Practice 1	DCP01Y1	
Diagnostic Practice 1	DIP01Y1	
Imaging Technology 1	IMT01Y1	
Professional Practice	PRP01Y1	
Pathology	PTY01Y1	
Second year		
Module name	Module code	Prerequisite code
Year modules		
Anatomy and Physiology 2	ANP01Y2	ANP01Y1 PTY01Y1
Diagnostic Clinical Practice 2	DCP01Y2	DIP01Y1 DCP01Y1
Diagnostic Practice 2	DIP01Y2	DIP01Y1 DCP01Y1
Imaging Technology 2	IMT01Y2	IMT01Y1 APP01Y1
Professional Practice and Research Principles	PRR01Y2	PRP01Y1
Third year		
Module name	Module code	Prerequisite code
Year Modules		
Diagnostic Clinical Practice 3	DCP01Y3	DIP01Y2 DCP01Y2
Diagnostic Practice 3	DIP01Y3	DIP01Y2 DCP01Y2
Management Principles and Practice	MPP01Y3	
Research Methods	REM01Y3	PRR01Y2

Specialized Diagnostic Practice 3	SDP01Y3	DIP01Y2 DCP01Y2
<b>Fourth Year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Diagnostic Clinical Practice 4	DCP01Y4	DIP01Y3 DCP01Y3
Diagnostic Practice 4	DIP01Y4	DIP01Y3 DCP01Y3
Radiographic Department Management Strategies	RGM01Y4	MPP01Y3
Research Project 4	RPR01Y4	REM01Y3
Specialized Diagnostic Practice 4	SDP01Y4	SDP01Y3 DIP01Y3 DCP01Y3
<b>Choose one of the following elective modules</b>		
Education in Health	EIH01Y4	SDP01Y3 DIP01Y3 DCP01Y3
<b>OR</b>		
Imaging Informatics	IMT01Y4	SDP01Y3 DIP01Y3 DCP01Y3

## **HS7.2 BACHELOR OF DIAGNOSTIC ULTRASOUND (B9M03Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

**Work integrated learning (WIL) is incorporated into the employment contract with the respective clinical training centre.**

### **HS7.2.1 Purpose**

The purpose of the qualification is to develop a competent professional, who has a thorough knowledge and the skills required for the profession of Diagnostic Ultrasound and who has gained experience in applying such knowledge and skills in accredited workplaces. Successful completion of this qualification will entitle the student to register with the Health Professions Council of South Africa (HPCSA) as a Sonographer.

### **HS7.2.2 Outcomes**

After completion of the programme, the student will be able to:

1. Demonstrate the knowledge of natural and life sciences and pathology that enables application in the clinical field.
2. Assess and perform patient care in a manner which ensures that the patient's welfare is maintained.

3. Apply the principles of human rights, ethics and medical law which ensure the well-being of the patient.
4. Perform the sonographic protocols and procedures to produce optimum quality images in the specified areas of diagnostic ultrasound.
5. Critically assess the sonographic images and apply pattern recognition to determine aberrant appearances in keeping with pathology.
6. Apply the ultrasound specific measures which ensure that the health and safety of patients, self and colleagues are maintained.
7. Plan, develop and apply total quality management appropriate to the sonographic context.
8. Demonstrate research skills and foster a research climate in Ultrasound imaging.

### HS7.2.3 Rules of access and admission requirements

A Senior Certificate or an equivalent qualification at an equivalent standard as determined by a Faculty Status Committee, with the following Subjects:

- Mathematics with a Higher Grade D or Standard Grade C symbol.
- Physical Science with a Higher Grade D or Standard Grade C symbol and
- Biology with a Higher Grade C or Standard Grade B symbol or
- Physiology with a Higher Grade C or Standard Grade B symbol.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
31	5	4	Not accepted	4	5

### Selection criteria

Selection will be based on:

- Academic merits.
- Clinical placement in a Health Professional Council of South Africa accredited clinical training site.

### HS7.2.4 Pass requirements

1. Students retain credits for all modules passed except where requirement 2 applies;
2. If a student fails any module in any level of study, he/she forfeits the credits for the Diagnostic Ultrasound Clinical Practice Module for that level of study but retain credits for all other modules passed.
3. Students may enrol for a module in the following year of study provided that they have passed the prerequisite module/s.
4. Students may not register for module combinations that lead to timetable clashes. The Department will make the final decision as to the modules for which the student may register.
5. Students are promoted:
  - 5.1 to the second year of study if they have passed all the first-year modules.
  - 5.2 to the third year of study if they have passed all the second-year modules.
  - 5.3 to the fourth year of study if they have passed all the third-year modules.

6. To be admitted to any module in the second or third academic year of study, and progress to the following year of study, students must have passed at least 60% of the modules in the previous year of study.
7. Students must pass at least 3 out of the 7 modules in the first year of study in order to qualify for readmission to the first year of study.
8. A range of assessment strategies and weightings, as laid out in the relevant module's learning guide, explains the continuous assessment criteria specified for promotion to the next year of study.

#### **HS7.2.5 Specific rules and regulations for Medical Imaging and Radiation Sciences students**

1. Students must familiarize themselves with the internal rules and regulations of the Department of Medical Imaging and Radiation Sciences. These rules and regulations, as set out in the Departmental policy document, are binding.
2. The programme is not offered as a limited contact or distance learning programme. Students who elect to leave the country will be unable to continue with their studies.
3. All students are required to complete a minimum number of clinical hours / competencies as stipulated by the HPCSA at the time.

#### **HS7.2.6 Curriculum**

All modules are Continuous Evaluation modules.

First year		
Module name	Module code	Prerequisite code
Year Modules		See admission requirements
Anatomy and Physiology 1	ANP01Y1	
Applied Physics	APP01Y1	
Imaging Technology 1	IMT02Y1	
Professional Practice	PRP01Y1	
Pathology	PTY01Y1	
Ultrasound Clinical Practice 1	UCP01Y1	
Ultrasound Practice 1	USP01Y1	
Second year		
Module name	Module code	Prerequisite code
Year modules		
Anatomy and Physiology 2	ANP01Y2	ANP01Y1 PTY01Y1
Professional Practice and Research Principles	PRR01Y2	PRP01Y1 USP01Y1 UCP01Y1



Ultrasound Clinical Practice 2	UCP01Y2	USP01Y1 UCP01Y1 PRP01Y1
Ultrasound Physics Instrumentation	UPI01Y2	IMT02Y1 APP01Y1
Ultrasound Practice 2	USP01Y2	USP01Y1 UCP01Y1 PRP01Y1
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Applied Psychology	APY01Y3	PRR01Y2
Management Principles and Practice	MPP01Y3	
Research Methods	REM01Y3	PRR01Y2
Specialized Ultrasound	SUS01Y3	USP01Y2 UPI01Y2
Ultrasound Clinical Practice 3	UCP01Y3	USP01Y2 UCP01Y2 PRR01Y2
Ultrasound Practice 3	USP01Y3	USP01Y2 UCP01Y2 PRR01Y2
<b>Fourth Year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Radiographic Department Management Strategies	RGM01Y4	MPP01Y3
Research Project 4	RPR01Y4	REM01Y3
Specialized Ultrasound	SUS01Y4	USP01Y3 UCP01Y3 SUS01Y3
Ultrasound Clinical Practice 4	UCP01Y4	USP01Y3 UCP01Y3
Ultrasound Practice 4	USP01Y4	USP01Y3 UCP01Y3

Choose one of the following elective modules		
Education in Health	EIH01Y4	USP01Y3 UCP01Y3 SUS01Y3
OR		
Imaging Informatics	IMT01Y4	USP01Y3 UCP01Y3 SUS01Y3

### HS7.3 **BACHELOR OF NUCLEAR MEDICINE TECHNOLOGY (B9M02Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

**Work integrated learning (WIL) is incorporated into the employment contract with the respective clinical training centre.**

#### HS7.3.1 **Purpose**

The purpose of the qualification is to develop a competent professional nuclear medicine technologist who has thorough grounding in the knowledge and skills required for Nuclear Medicine Technology and who has gained experience in the application of such knowledge and skills in accredited workplaces.

Successful completion of this qualification will entitle the student to register with the Health Professions Council of South Africa (HPCSA) as a Nuclear Medicine Technologist.

#### HS7.3.2 **Outcomes**

After completion of the programme, the student will be able to:

1. Apply principles of human rights, ethics and relevant medical law to ensure the well-being of the patient.
2. Perform a range of conventional and specialized nuclear medicine imaging procedures in order to facilitate diagnosis and treatment of the patient.
3. Operate and ensure quality functioning of all nuclear medicine instrumentation to provide the best diagnostic capability of the instruments.
4. Function in a type 'B' radiopharmacy laboratory to safely dispense radiopharmaceuticals for nuclear medicine imaging procedures.
5. Perform a range of in-vitro and in-vivo non-imaging nuclear medicine procedures in a type 'C' radiopharmacy laboratory.
6. Assure quality of all aspects of a nuclear medicine investigation and the service provided.
7. Plan, develop and apply total quality management appropriate to the nuclear medicine context.
8. Demonstrate research skills and foster a research climate in nuclear medicine.
9. Apply the principles, specific knowledge, skills and values related to the chosen elective subject.

#### HS7.3.3 **Rules of access and admission requirements**

A Senior Certificate or an equivalent qualification at an equivalent standard as determined by a Faculty Status Committee, with the following Subjects:

- Mathematics with a Higher Grade D or Standard Grade C symbol.

- Physical Science with a Higher Grade D or Standard Grade C symbol.
- Biology with a Higher Grade C or Standard Grade B symbol or,
- Physiology with a Higher Grade C or Standard Grade B symbol.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
31	5	4	Not accepted	4	5

### Selection criteria

Selection will be based on:

- Academic merits.
- Clinical placement in a Health Professional Council of South Africa accredited clinical training site.

#### HS7.3.4 Pass requirements

1. Students retain credits for all modules passed except where requirement 2 applies;
2. If a student fails any module in any level of study, he/she forfeits the credits for the Nuclear Medicine Clinical Practice Module for that level of study but retain credits for all other modules passed.
3. Students may enrol for a module in the following year of study provided that they have passed the prerequisite module/s.
4. Students may not register for module combinations that lead to timetable clashes. The Department will make the final decision as to the modules for which the student may register.
5. Students are promoted:
  - 5.1 to the second year of study if they have passed all the first-year modules.
  - 5.2 to the third year of study if they have passed all the second-year modules.
  - 5.3 to the fourth year of study if they have passed all the third-year modules.
6. To be admitted to any module in the second or third academic year of study, and progress to the following year of study, students must have passed at least 60% of the modules in the previous year of study.
7. Students must pass at least 3 out of the 7 modules in the first year of study in order to qualify for readmission to the first year of study.
8. A range of assessment strategies and weightings, as laid out in the relevant module's learning guide, explains the continuous assessment criteria specified for promotion to the next year of study.

#### HS7.3.5 Specific rules and regulations for Medical Imaging and Radiation Sciences students

1. Students must familiarize themselves with the internal rules and regulations of the Department of Medical Imaging and Radiation Sciences. These rules and regulations, as set out in the Departmental policy document, are binding.
2. The programme is not offered as a limited contact or distance learning programme. Students who elect to leave the country will be unable to continue with their studies.
3. All students are required to complete a minimum number of clinical hours / competencies as stipulated by the HPCSA at the time.

## HS7.3.6 Curriculum

All modules are Continuous Evaluation modules.

All modules are Continuous Evaluation modules.		
First year		
Module name	Module code	Prerequisite code
Year Modules		See admission requirements
Anatomy and Physiology 1	ANP01Y1	
Applied Physics	APP01Y1	
Nuclear Medicine Clinical Practice 1	NCP01Y1	
Nuclear Medicine Practice 1	NMP01Y1	
Professional Practice	PRP01Y1	
Pathology	PTY01Y1	
Radiopharmacy 1	RPY01Y1	
Second year		
Module name	Module code	Prerequisite code
Year modules		
Anatomy and Physiology 2	ANP01Y2	ANP01Y1 PTY01Y1
Nuclear Medicine Clinical Practice 2	NCP01Y2	NMP01Y1 NCP01Y1 RPY01Y1
Nuclear Medicine Instrumentation	NMI01Y2	NMP01Y1 NCP01Y1 RPY01Y1
Nuclear Medicine Practice 2	NMP01Y2	NMP01Y1 NCP01Y1 RPY01Y1
Professional Practice and Research Principles	PRR01Y2	PRP01Y1
Radiopharmacy 2	RPY01Y2	RPY01Y1
Third year		
Module name	Module code	Prerequisite code
Year Modules		
Management Principles and Practice	MPP01Y3	

Nuclear Medicine Clinical Practice 3	NCP01Y3	NMP01Y2 NCP01Y2 RPY01Y2
Nuclear Medicine Practice 3	NMP01Y3	NMP01Y2 NCP01Y2 RPY01Y2
Research Methods	REM01Y3	PRR01Y2
Radiopharmacy 3	RPY01Y3	RPY01Y2 NMI01Y2
Therapeutics	THR01Y3	RPY01Y2 NMI01Y2
<b>Fourth Year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Nuclear Medicine Clinical Practice 4	NCP01Y4	NMP01Y3 NCP01Y3 RPY01Y3
Nuclear Medicine Practice 4	NMP01Y4	NMP01Y3 NCP01Y3 RPY01Y3
Radiographic Department Management Strategies	RGM01Y4	MPP01Y3
Research Project 4	RPR01Y4	REM01Y3
Radiopharmacy 4	RPY01Y4	RPY01Y3
<b>Choose one of the following modules</b>		
Education in Health	EIH01Y4	NMP01Y3 NCP01Y3
<b>OR</b>		
Imaging Informatics	IMT01Y4	NMP01Y3 NCP01Y3

## **HS7.4 BACHELOR OF RADIATION THERAPY (B9M04Q)**

### **Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

**Work integrated learning (WIL) is incorporated into the employment contract with the respective clinical training centre.**

### **HS7.4.1 Purpose**

The purpose of the qualification is to develop a professional radiation therapist who is competent in the knowledge and skills required for Radiation Therapy and has gained experience in applying such knowledge and skills in accredited workplaces.

Successful completion of this qualification will entitle the student to register with the Health Professions Council of South Africa (HPCSA) as a Radiation Therapist.

### **HS7.4.2 Outcomes**

After completion of the programme, the student will be able to:

1. Apply the principles of human rights, ethics and relevant medical law which ensure the well-being of the patient.
2. Demonstrate a critical understanding and application of quality assurance and radiation protection in a Radiation Therapy division.
3. Apply scientific knowledge and technical skills to perform radiation oncology laboratory techniques and procedures.
4. Perform radiotherapy procedures competently to ensure optimal radiation localization and immobilization for radiation treatment.
5. Perform radiotherapy procedures competently to ensure optimal treatment planning.
6. Apply scientific knowledge and professional skills to perform therapeutic procedures for accurate delivery of the radiation treatment prescribed.
7. Plan, develop and apply total quality management appropriate to the radiation therapy context.
8. Demonstrate research skills and foster a research climate in radiation therapy.
9. Apply the principles, specific knowledge, skills and values related to the chosen elective subject.

### **HS7.4.3 Rules of access and admission requirements**

A Senior Certificate or an equivalent qualification at an equivalent standard as determined by a Faculty Status Committee, with the following Subjects:

- Mathematics with a Higher Grade D or Standard Grade C symbol.
- Physical Science with a Higher Grade D or Standard Grade C symbol.
- Biology with a Higher Grade C or Standard Grade B symbol or,
- Physiology with a Higher Grade C or Standard Grade B symbol.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
31	5	4	Not accepted	4	5

## Selection criteria

Selection will be based on:

- Academic merits.
- Clinical placement in a Health Professional Council of South Africa accredited clinical training site.

### HS7.4.4 Pass requirements

1. Students retain credits for all modules passed except where requirement 2 applies;
2. If a student fails any module in any level of study, he/she forfeits the credits for the Radiation Therapy Clinical Practice Module for that level of study but retain credits for all other modules passed.
3. Students may enrol for a module in the following year of study provided that they have passed the prerequisite module/s.
4. Students may not register for module combinations that lead to timetable clashes. The Department will make the final decision as to the modules for which the student may register.
5. Students are promoted:
  - 5.1 to the second year of study if they have passed all the first-year modules.
  - 5.2 to the third year of study if they have passed all the second-year modules.
  - 5.3 to the fourth year of study if they have passed all the third-year modules.
6. To be admitted to any module in the second or third academic year of study, and progress to the following year of study, students must have passed at least 60% of the modules in the previous year of study.
7. Students must pass at least 3 out of the 7 modules in the first year of study in order to qualify for readmission to the first year of study.
8. A range of assessment strategies and weightings, as laid out in the relevant module's learning guide, explains the continuous assessment criteria specified for promotion to the next year of study.

### HS7.4.5 Specific rules and regulations for Medical Imaging and Radiation Sciences students

1. Students must familiarize themselves with the internal rules and regulations of the Department of Medical Imaging and Radiation Sciences. These rules and regulations, as set out in the Departmental policy document, are binding.
2. The programme is not offered as a limited contact or distance learning programme. Students who elect to leave the country will be unable to continue with their studies.
3. All students are required to complete a minimum number of clinical hours/competencies as stipulated by the HPCSA at the time.

### HS7.4.6 Curriculum

All modules are Continuous Evaluation modules.

First year		
Module name	Module code	Prerequisite code
Year Modules		See admission requirements
Anatomy and Physiology 1	ANP01Y1	
Applied Physics	APP01Y1	
Professional Practice	PRP01Y1	

Pathology	PTY01Y1	
Radiation Therapy Clinical 1	RTC01Y1	
Radiation Therapy Practice 1	RTP01Y1	
Treatment Planning & Dosimetry 1	TPD01Y1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year modules</b>		
Anatomy and Physiology 2	ANP01Y2	ANP01Y1 PTY01Y1
Professional Practice and Research Principles	PRR01Y2	PRP01Y1
Radiation Therapy Clinical 2	RTC01Y2	RTP01Y1 RTC01Y1
Radiation Therapy Practice 2	RTP01Y2	RTP01Y1 RTC01Y1
Treatment Planning & Dosimetry 2	TPD01Y2	TPD01Y1
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Applied Psychology	APY01Y3	PRR01Y2
Management Principles and Practice	MPP01Y3	
Research Methods	REM01Y3	PRR01Y2
Radiation Therapy Clinical 3	RTC01Y3	RTP01Y2 RTC01Y2
Radiation Therapy Practice 3	RTP01Y3	RTP01Y2 RTC01Y2
Treatment Planning & Dosimetry 4	TPD01Y3	TPD01Y2



Fourth Year		
Module name	Module code	Prerequisite code
<b>Year Modules</b>		
Radiographic Department Management Strategies	RGM01Y4	MPP01Y3
Research Project 4	RPR01Y4	REM01Y3
Radiation Therapy Clinical 4	RTC01Y4	RTP01Y3 RTC01Y3
Radiation Therapy Practice 4	RTP01Y4	RTP01Y3 RTC01Y3
Treatment Planning & Dosimetry 4	TPD01Y4	TPD01Y3
<b>Choose one of the following elective modules</b>		
Education in Health	EIH01Y4	RTP01Y3 RTC01Y3
<b>OR</b>		
Imaging Informatics	IMT01Y4	RTP01Y3 RTC01Y3

## HS7.5 [MASTER OF MEDICAL IMAGING AND RADIATION SCIENCES \(M9MI1Q\)](#)

### **Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF level 9**

**Research thesis 100%**

### HS7.5.1 **Purpose**

The purpose of the Master of Medical Imaging and Radiation Sciences is to enable successful learners to make a contribution to a chosen field of radiography through independent research, using advanced problem-solving skills and critical, reflective thinking. The learner will report the findings in a manner that meets the accepted criteria and ethical principles of the profession. The research problem, its justification, process and outcome will be reported in a dissertation that complies with the generally accepted norms for research at a Master's level. In this way, the learner will make a contribution to the existing body of knowledge for radiography ranging from fundamental concepts to advanced theoretical or applied knowledge that will develop and advance the radiography profession.

### HS7.5.2 **Outcomes**

The student will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of

- scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Report research findings at the appropriate level.
  6. Make conclusions, suggestions and recommendations based on the data collected that are reasonable and justifiable.

### **HS7.5.3 Rules of access and admission requirements**

The minimum requirement is a Radiography related qualification at NQF level 8 or equivalent. Applications from person with an equivalent qualification will be considered by a constituted status committee in line with the University's and faculty's regulations.

#### **Selection criteria**

The selection of Master's students will be done in accordance with rules and regulations of the Higher Degrees Committee of the University of Johannesburg as stipulated for postgraduate programmes. Selection includes an approval of the student's research concept by the Department Research Committee which will grant the student permission to register and then develop a research proposal.

### **HS7.5.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

### **HS7.5.5 Curriculum**

A research project and a thesis:

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Dissertation: Health Sciences (Medical Imaging and Radiation)	DMI9XA1
<b>Semester two</b>	
Research Project and Dissertation: Health Sciences (Medical Imaging and Radiation)	DMI9XB1

### **HS7.6 DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: MEDICAL IMAGING AND RADIATION SCIENCES (P9HS8Q)**

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

#### **HS7.6.1 Purpose**

The purpose of the PhD (Health Sciences) is to promote the career advancement of students in the area of Health Sciences by enabling students to conduct independent, novel research within a specific discipline or in a multidisciplinary manner in Health Sciences that will contribute to the knowledge and practice in the area of Health Sciences.

The defining characteristic of this programme is that the candidate is required to demonstrate high level research capability and to make a significant and original academic contribution at the frontiers of health science. The research output must be of a quality to satisfy peer review and merit publication. It is intended that the student will undertake original research.

The student who successfully completes this qualification will be able to apply higher

level problem solving skills and critical, reflective thinking at the most advanced academic levels in the Medical Imaging and Radiation Sciences (MIRS) domain.

#### **HS7.6.2 Outcomes**

1. Demonstrate a systematic understanding of the domain of MIRS and a mastery of the skills and methods of research associated with the domain of MIRS.
2. Conceive, design, implement and disseminate a substantial process of research with scholarly integrity.
3. Make a contribution through original research that extends the frontier of knowledge by developing a substantial body of work in an area of MIRS, some of which merits national or international refereed publication.

#### **HS7.6.3 Rules of access and admission requirements**

The minimum admission requirement is a master's degree in MIRS or Radiography qualification or equivalent. Selection is based on approval by the Faculty's Higher Degrees Committee.

##### **Selection criteria**

Applications from persons with an equivalent qualification will be considered by a constituted status committee in line with the University's and Faculty's regulations.

Selection includes an approval of the student's research concept by the Department Research Committee which will grant the student permission to register and then develop a research proposal.

The selection and allocation of post-graduate students depends on the availability of supervisors.

#### **HS7.6.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

Certification of compliance with the requirements of the qualification is in accordance with the Certification Policy of the University, with due regard to the responsibility of the students, supervisors, relevant faculty administration officer, the Executive Dean of the faculty and the Registrar.

#### **HS7.6.5 Curriculum**

A research thesis. The research component is 100%.

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Medical Imaging and Radiation Sciences)	RMI10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Medical Imaging and Radiation Sciences)	RMI10X2

## **HS8.0      DEPARTMENT OF NURSING**

### **HS8.1      BACHELOR OF NURSING (B9N02Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

#### **HS8.1.1      Purpose**

The purpose of the Bachelor of Nursing is to produce professional graduates competent in the knowledge and skills required for managing and providing an integrated, holistic, scientifically based nursing and midwifery health care service to society. The aim is to develop reflective, caring practitioners capable of integrating principles, theory, proven techniques and relevant clinical skills in the delivery of a service, focusing on the promotion of health, prevention, diagnosis, treatment and rehabilitation of nursing and midwifery related problems. On completion of this programme, graduates will be able to register with SANC as a professional nurse and midwife, entitling them to practice independently and within a multidisciplinary team in the private or public health sector or in the education or research sector.

#### **HS8.1.2      Outcome**

1. Apply and execute the scientific principles of comprehensive nursing and midwifery care as a professional nurse and midwife.
2. Apply and justify the principle of research and science-based problem-solving.

#### **HS8.1.3      Rules of access and admission requirements**

At entrance level, the prospective student should hold a Further Education Certificate (level 4), with full exemption.

Owing to the limited number of clinical learning facilities, the following two additional selection criteria shall also apply:

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
30	5	4	Not accepted	4	4

#### **Selection criteria for this programme.**

Selection will be based on:

- Academic merit; APS score
- A structured personal interview
- English proficiency

#### HS8.1.4 Pass requirements

1. Students may enrol for a module in the following year, provided that:
  - (a) They have passed the prerequisites modules.
  - (b) The module selection does not lead to timetable clashes.
2. First year students must pass a minimum of 60% of the first-year modules as well as the prerequisites to proceed to the next level. This includes both the theoretical and clinical modules.
3. 100% attendance of all class and clinical practicals is compulsory.
4. Students may not register for the same module for a third time without permission from the Head of Department and Executive Dean.
5. Students have a maximum of six years to complete the qualification.

#### HS8.1.5 Clinical Practice (Work Integrated Learning in an accredited clinical institution)

1. Students should comply with the clinical/practical formative and summative assessment requirements in order to found competent in clinical skills.
2. Be registered as a Student Nurse with South African Nursing Council (SANC)
3. Students must by the end of each year complete the number of hours as regulated by the SANC for clinical practice which are detailed in the study guides and Bachelor of Nursing policy.

#### HS8.1.6 Curriculum

First year		
Module name	Module code	Prerequisite code
Semester one		
Fundamental Nursing Science 1A	FNS01A1	
Anatomy 1A	ANT01A1	
Physiology 1A	PHS01A1	
Psychology 1A	PSY1AA1	
Sociology 1A	SOC1AA1	
Semester two		
Fundamental Nursing Science 1B	FNS01B1	
Pharmacology 1	PHM01B1	
Anatomy 1B	ANT01B1	
Physiology 1B	PHS01B1	
Year modules		
Fundamental Nursing Science Clinical Practice 1C	FNC01Y1	

Second year		
Module name	Module code	Prerequisite code
Semester one		
General Nursing Science 1A	GNS01A2	FNS01B1 PHS01B1 ANT01B1
Mental Health Nursing Science 1	MHS01A2	
Mental Health Nursing Science Clinical Practice 1	MHC01A2	
Psychology 2A: Developmental Psych	PSY2AA2	PSY1AA1
Sociology 2A	SOC2AA2	SOC1AA1
Physiology 2A	PHS01A2	PHS01B1
Semester two		
General Nursing Science 1B	GNS01B2	
Physiology 2B	PHS01B2	PHS01A2
Year modules		
General Nursing Science Clinical Practice 1C	GNC01Y2	FNS01A1 FNC01Y1 FNS01B1 PHS01A1 PHS01B1
Third year		
Module name	Module code	Prerequisite code
Semester one		
General Nursing Science 2A	GNS01A3	All 1 <sup>st</sup> and 2 <sup>nd</sup> Year Modules.
Midwifery Nursing Science 1A	MNS01A3	
Semester two		
General Nursing Science 2B	GNS01B3	
Midwifery Nursing Science 1B	MNS01B3	

Year modules		
General Nursing Science Clinical Practice 2C	GNC01Y3	
Midwifery Nursing Science Clinical Practice 1C	MNC01Y3	
Research Methodology	RSM01Y3	
Fourth year		
Module name	Module code	Prerequisite code
Semester one		All 3 <sup>rd</sup> Year Modules.
General Nursing Science 3A	GNS01A4	
Midwifery Nursing Science 2A	MNS01A4	
Semester two		
General Nursing Science 3B	GNS01B4	
Midwifery Nursing Science 2B	MNS01B4	
Year modules		
General Nursing Science Clinical Practice 3C	GNC01Y4	
Midwifery Nursing Science Clinical Practice 2C	MNC01Y4	
Research Project	RSP01Y4	

## **HS8.2**      **POSTGRADUATE DIPLOMA IN MIDWIFERY (E9MW1Q)**

**Duration of programme**

**Part-Time: 2 years**

**NQF Level 8, 120 Credits**

### **HS8.2.1**      **Purpose**

The purpose of Postgraduate Diploma in Midwifery is to strengthen and deepen students' knowledge and skills in the field of midwifery, required to undertake advanced reflection and development by means of critical thinking and clinical decision making, practice and research methods. The aim is to empower midwife specialists with key competencies i.e. knowledge, skills, attitudes and values. On completion of this programme, graduates will be able to register with the South African Nursing Council (SANC) midwife specialists, entitling them to work independently within the multidisciplinary team to provide promotive, preventive, curative and rehabilitative services to individuals, families, groups, and communities.

### **HS8.2.2**      **Outcome**

1. Apply competencies to practice as an independent midwife specialist in midwifery clinical area, public and private sector.
2. Articulate vertically to any relevant degree at NQF level 9, for an example: Master's in midwifery.

### **HS8.2.3**      **Rules of access and admission requirements**

Students are admitted in accordance with the national prescribed admittance criteria as provided by the Higher Education Qualifications Framework (HEQF), and institutional policies which include the Academic Regulations Policy and the Policy on Admission and Selection of the University of Johannesburg. The latter policy states that academics involved in selection and admission "considers the need to redress past inequalities, aims to provide equity, quality and academic excellence. The UJ Academic Regulations Policy instructs academics to ensure that admission is subject to the student equity profile.

#### **Minimum Admission Requirements**

1. A Bachelor's Degree in Nursing (R.174), alternatively.
2. A Bachelor's Degree in Nursing (R.425)
3. A Diploma in Nursing: General Nurse (R.171) with Advanced Diploma in Midwifery (R.1497).
4. Minimum of two (2) years' experiences, inclusive of a year of community service, as a Professional Nurse or General Nurse and Midwife.
5. Proof of registration with the SANC as a Professional Nurse or General Nurse and Midwife.
6. Proof of employment, detailing midwifery experience in years.
7. Approval from your Nursing Service Manager (NSM) to register for the programme and rotate through midwifery/maternity units.
8. The prospective student should remain employed at the institution where the permission has been granted by the NSM for the duration of the programme period.

#### **Programme selection requirements**

1. Signed agreement from NSM and/or preceptor to assist with the practical component.
2. Signed NSM agreement to move candidate to a clinical training facility approved and accredited by SANC for University of Johannesburg.



3. Minimum two (2) years midwifery clinical experience.
4. Professional indemnity.
5. Letter of permission from the clinical preceptor pledging the clinical academic support.

#### HS8.2.4 Curriculum

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite Code</b>
<b>Semester one</b>		
Ethical Legal Professional Frameworks	ELP8X01	
<b>Semester two</b>		
Normal and abnormal pregnancy	NAP8X01	
<b>Year Modules</b>		
Clinical Practice in midwifery	CPM8XY1	
Research	REN8XY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Normal and Abnormal Labour	NAL8X02	
<b>Semester Two</b>		
Postnatal Care	PSC8X02	
The Neonate	NEO8X02	
<b>Year modules</b>		
Clinical Practice in Midwifery	CPM8XY2	

## **HS8.3** **POSTGRADUATE DIPLOMA IN CRITICAL CARE NURSING (ADULT)(E9IC1Q)**

**Duration of programme**

**Part-Time: 2 years**

**NQF Level 8, 130 Credits**

### **HS8.3.1 Purpose**

The purpose of Postgraduate Diploma in Critical Care Nursing (Adult) is to strengthen and deepen students' knowledge and expertise in adult critical care as a specialty of the nursing profession. It is designed to develop the student's skills based on current thinking, practice, and research methods in the field of adult critical care nursing. The aim is to empower the critical care nursing specialists with key competencies i.e.: knowledge, skills, attitudes, and values. On completion of this programme, graduates will be able to register with the South African Nursing Council (SANC) as critical care nursing specialists, entitling them to work independently within the multidisciplinary team to undertake professional and highly skilled work in adult critical care. This includes prevention of diseases, injuries, complications, screening, appropriate management, and prompt referral of patients with specific and complex health problems in the adult critical care settings.

### **HS8.3.2 Outcome**

1. Apply competencies to practice as an independent specialist in adult critical care setting, public and private sector.
2. Articulate vertically to any relevant degree at NQF level 9, for an example: Master's in Medical and Surgical Nursing Science.

### **HS8.3.3 Rules of access and admission requirements**

Students are admitted in accordance with the national prescribed admittance criteria as provided by the Higher Education Qualifications Framework (HEQF), and institutional policies which include the Academic Regulations Policy and the Policy on Admission and Selection of the University of Johannesburg (UJ). The latter policy states that academics involved in selection and admission "considers the need to redress past inequalities, aims to provide equity, quality and academic excellence..." The UJ Academic Regulations Policy instructs academics to ensure that admission is subject to the student equity profile.

#### **Minimum Admission Requirements**

1. A Bachelor's Degree in Nursing (R.174), alternatively
2. A Bachelor's Degree in Nursing (R.425)
3. A Diploma in Nursing: General Nurse (R.171) with Advanced Diploma in Midwifery (R.1497).
4. Minimum of two (2) years' experience, (inclusive of a year of community service) after registration with the South African Nursing Council (SANC) as a Professional Nurse or General Nurse and Midwife.
5. A minimum of two (2) years of post-basic clinical experience in adult critical care.
6. Proof of current registration with the SANC as a Professional Nurse or General Nurse and Midwife.
7. Proof of employment, detailing adult critical care experience in years.
8. Approval from your Nursing Service Manager (NSM) to register for the programme and rotate through adult critical care health settings.
9. The prospective student should remain employed at the institution where the permission has been granted by the NSM for the duration of the programme period.

## Programme selection requirements

1. Signed agreement from NSM and/or preceptor to assist with the practical component.
2. Signed NSM agreement to move candidate to a clinical training facility approved and accredited by SANC for University of Johannesburg.
3. Minimum of two (2) years of critical care nursing (adult) experience.
4. Professional indemnity.
5. Letter of permission from the clinical preceptor pledging the clinical academic support.

### HS8.3.4 Curriculum

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite Code</b>
<b>Semester one</b>		
Ethical Legal Professional Frameworks	ELP8X01	
<b>Semester two</b>		
Pulmonology and Specific Pulmonary Conditions	PSP8X01	
<b>Year modules</b>		
Clinical practice in adult critical care	CPA8XY1	
Research	REN8XY1	
Cardiology and Cardiothoracic surgery	CCS8XY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Nephrology	NEP8X02	
Neurology and Neurosurgery	NNS8X02	
<b>Semester two</b>		
General Surgery, Sepsis and Endocrinology	SSE8X02	
<b>Year modules</b>		
Clinical Practice in Adult Critical Care	CPA8XY2	

## **HS8.4**      **POSTGRADUATE DIPLOMA IN NURSING EDUCATION (E9ED1Q)**

**Duration of programme**

**Part-Time: 2 years**

**NQF Level 8, 120 Credits**

### **HS8.4.1**      **Purpose**

The purpose of Postgraduate Diploma in Nursing Education is to strengthen and deepen students' knowledge and skills in the field of nursing education. It is designed to develop student's skills based on current thinking, practice, and research methods in the field of nursing education. The aim is to empower nursing education specialists with high level of theoretical engagement and intellectual independence to acquire the ability to relate knowledge to a range of contexts, to undertake professional and highly skilled teaching ability in nursing education. On completion of this programme, graduates will be able to register with the South African Nursing Council (SANC) as nursing education specialists, entitling them to work independently within the multidisciplinary team.

### **HS8.4.2**      **Outcome**

1. Apply competencies to practice as an independent nursing education specialist in public and private sector.
2. Articulate vertically to any relevant degree at NQF Level 9, for an example: a master's in nursing education.

### **HS8.4.3**      **Rules of access and admission requirements**

Students are admitted in accordance with the national prescribed admittance criteria as provided by the Higher Education Qualifications Framework (HEQF), and institutional policies which include the Academic Regulations Policy and the Policy on Admission and Selection of the University of Johannesburg. The latter policy states that academics involved in selection and admission "considers the need to redress past inequalities, aims to provide equity, quality and academic excellence..." The UJ Academic Regulations Policy instructs academics to ensure that admission is subject to the student equity profile.

#### **Minimum Admission Requirements**

1. A Bachelor's Degree in Nursing (R.174), alternatively
2. A Bachelor's Degree in Nursing (R.425)
3. A Diploma in Nursing: General Nurse (R.171) with Advanced Diploma in Midwifery (R.1497).
4. A minimum of two (2) years' experience, (inclusive of a year of community service), after registration by the South African Nursing Council as a Professional Nurse or General Nurse and Midwife.
5. Proof of registration with the SANC as a Professional Nurse or General Nurse and Midwife.
6. Approval from your Nursing Service Manager (NSM) to register for the programme.

#### HS8.4.4 Curriculum

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite Code</b>
<b>Semester one</b>		
Ethical Legal Professional frameworks	ELP8X01	
<b>Semester two</b>		
Curriculum orientation and design	COG8X01	
Didactics	DID8X01	
<b>Year modules</b>		
Research	REN8XY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Teaching and learning strategies and media	TLS8X02	
Assessment and evaluation of learning	AEL8X02	
<b>Semester two</b>		
Contemporary dynamics in Nursing Education	CDN8X02	
<b>Year modules</b>		
Practice in Nursing Education	PNE8XY2	

## **HS8.5** **POSTGRADUATE DIPLOMA IN PRIMARY CARE NURSING (E9PC1Q)**

**Duration of programme**

**Part-Time: 2 years**

**NQF Level 8, 132 Credits**

### **HS8.5.1 Purpose**

The purpose of Postgraduate Diploma in Primary Care Nursing is to strengthen and deepen students' knowledge and expertise in primary care nursing as a specialty of the nursing profession. It is designed to develop the student's skills based on current thinking, practice, and research methods in the field of primary care nursing. The aim is to empower the primary care nursing specialists with key competencies i.e.: knowledge, skills, attitudes, and values. On completion of this programme, graduates will be able to register with the South African Nursing Council (SANC) as primary care nursing specialists, entitling them to work independently within the multidisciplinary team to undertake professional and highly skilled work in primary nursing care. This includes prevention of diseases, injuries, complications, screening, appropriate management, and prompt referral of patients with specific and complex health problems in the primary nursing care settings.

### **HS8.5.2 Outcome**

1. Apply competencies to practice as an independent specialist in primary care nursing setting, public and private sector.
2. Articulate vertically to any relevant degree at NQF level 9, for an example: Master's in Primary Health Care.

### **HS8.5.3 Rules of access and admission requirements**

Students are admitted in accordance with the national prescribed admittance criteria as provided by the Higher Education Qualifications Framework (HEQF), and institutional policies which include the Academic Regulations Policy and the Policy on Admission and Selection of the University of Johannesburg (UJ). The latter policy states that academics involved in selection and admission "considers the need to redress past inequalities, aims to provide equity, quality and academic excellence..." The UJ Academic Regulations Policy instructs academics to ensure that admission is subject to the student equity profile.

#### **Minimum Admission Requirements**

1. A Bachelor's Degree in Nursing (R.174), alternatively
2. A Bachelor's Degree in Nursing (R.425)
3. A Diploma in Nursing: General Nurse (R.171) with Advanced Diploma in Midwifery (R.1497).
4. Minimum of two (2) years' experience, (inclusive of a year of community service) after registration with the South African Nursing Council (SANC) as a Professional Nurse or General Nurse and Midwife.
5. A minimum of two (2) years of post-basic clinical experience in Primary Health Care.
6. Proof of current registration with the SANC as a Professional Nurse or General Nurse and Midwife.
7. Proof of employment, detailing primary health care experience in years.
8. Approval from your Nursing Service Manager (NSM) to register for the programme and rotate through primary health care settings.
9. The prospective student should remain employed at the institution where

the permission has been granted by the NSM for the duration of the programme period.

### Programme selection requirements

1. Signed agreement from NSM and/or preceptor to assist with the practical component.
2. Signed NSM agreement to move candidate to a clinical training facility approved and accredited by SANC for University of Johannesburg.
3. Minimum of two (2) years of primary health care experience.
4. Professional indemnity.
5. Letter of permission from the clinical preceptor pledging the clinical academic support.

### HS8.5.4 Curriculum

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite Code</b>
<b>Semester one</b>		
Ethical Legal Professional Frameworks	ELP8X01	
ENT, Eye and Skin System	ENT8X01	
<b>Semester two</b>		
Respiratory and Cardiovascular systems	RCS8X01	
<b>Year modules</b>		
Clinical Practice in Primary Care Nursing	CPP8XY1	
Research	REN8XY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
HIV, STI and Genitourinary system	HSG8X02	
Gastrointestinal System and Endocrine System	GSE8X02	
<b>Semester two</b>		
Musculo-Skeletal & Central Nervous System	MSC8X02	
<b>Year modules</b>		
Clinical Practice in Primary Care Nursing	CPP8XY2	

## **HS8.6 POSTGRADUATE DIPLOMA IN HEALTH SERVICES MANAGEMENT (E9HS1Q)**

**Duration of programme**

**Part-Time: 2 years**

**NQF Level 8, 130 Credits**

### **HS8.6.1 Purpose**

The purpose of Postgraduate Diploma in Health Services Management is to strengthen and deepen students' knowledge and skills in the field of health services management. It is designed to develop student's skills based on current thinking, practice, and research methods in the field of health services management. The aim is to empower health services management specialists with high level of theoretical engagement and intellectual independence to acquire the ability to relate knowledge to a range of contexts, to undertake professional and highly skilled teaching ability in health services management. On completion of this programme, graduates will be able to register with the South African Nursing Council (SANC) as health services management specialists, entitling them to work independently within the multidisciplinary team.

### **HS8.6.2 Outcome**

1. Apply competencies to practice as an independent health services management specialist in public and private sector.
2. Articulate vertically to any relevant degree at NQF Level 9, for an example: a master's in health services management.

### **HS8.6.3 Rules of access and admission requirements**

Students are admitted in accordance with the national prescribed admittance criteria as provided by the Higher Education Qualifications Framework (HEQF), and institutional policies which include the Academic Regulations Policy and the Policy on Admission and Selection of the University of Johannesburg. The latter policy states that academics involved in selection and admission "considers the need to redress past inequalities, aims to provide equity, quality and academic excellence..." The UJ Academic Regulations Policy instructs academics to ensure that admission is subject to the student equity profile.

#### **Minimum Admission Requirements**

1. A Bachelor's Degree in Nursing (R.174), alternatively
2. A Bachelor's Degree in Nursing (R.425)
3. A Diploma in Nursing: General Nurse (R.171) with Advanced Diploma in Midwifery (R.1497).
4. A minimum of two (2) years' experience, (inclusive of a year of community service), after registration by the South African Nursing Council as a Professional Nurse or General Nurse and Midwife.
5. Proof of registration with the SANC as a Professional Nurse or General Nurse and Midwife.
6. Approval from your Nursing Service Manager (NSM) to register for the programme.



**HS8.6.4 Curriculum**

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite Code</b>
<b>Semester one</b>		
Ethical Legal Professional Frameworks	ELP8X01	
<b>Semester two</b>		
Health Services Management	HSM8X01	
Leadership Development	LDQ8X01	
<b>Year modules</b>		
Research	REN8XY1	
Clinical Practice	CPH8XY1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Health Services Management	CHM8X02	
Health Services Management Practices	CHP8X02	
<b>Semester 2</b>		
Resource Management	RMN8X02	

**HS8.7 MASTER OF NURSING SCIENCE IN COMMUNITY HEALTH NURSING SCIENCE (M9N02Q)****Duration of programme****Full-time: Minimum 1 year and Maximum 2 years****Part-time: Minimum 1 year and Maximum 3 years****NQF Level 9, 180 Credits (HEQF aligned)****Research dissertation 100%****HS8.7.1 Purpose**

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

## HS8.7.2 Outcome

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

## HS8.7.3 Rules of access and admission requirements

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at NQF level 8 or a post graduate diploma at NQF level 8.

### Additional selection criteria

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration as a general and community health nurse with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

### Specific selection criterion

Registration at SANC as a community nurse.

## HS8.7.4 Pass requirements

The general regulations for master's degrees are applicable to this qualification.

## HS8.7.5 Curriculum

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Community Health Semester 1	NCH9X01
<b>Semester two</b>	
Dissertation: Community Health Semester 2	NCH9X02

## HS8.8 **MASTER OF NURSING SCIENCE IN COMMUNITY HEALTH NURSING SCIENCE: OCCUPATIONAL HEALTH NURSING SCIENCE (M9N04Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

## HS8.8.1 Purpose

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

## **HS8.8.2 Outcome**

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

## **HS8.8.3 Rules of access and admission requirements**

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

### **Additional selection criteria**

1. A minimum 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration as a general and occupational health nurse with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

### **Specific selection criterion**

Registration as SANC as an occupational health nurse.

## **HS8.8.4 Pass requirements**

The general regulations for master's degrees are applicable to this qualification.

## **HS8.8.5 Curriculum**

A dissertation on an approved topic

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Dissertation: Occupational Health Nursing Science Semester 1	NOH9X01
<b>Semester two</b>	
Dissertation: Occupational Health Nursing Science Semester 2	NOH9X02

## **HS8.9 MASTER OF NURSING SCIENCE IN COMMUNITY HEALTH NURSING SCIENCE: PRIMARY HEALTH CARE (M9N06Q)**

### **Duration of programme**

**Full-time: Minimum 1 year and maximum 2 years**

**Part-time: Minimum 1 year and maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

## **HS8.9.1 Purpose**

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis

for advanced learning.

#### **HS8.9.2 Outcome**

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

#### **HS8.9.3 Rules of access and admission requirements**

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

##### **Additional Selection criteria**

1. A minimum 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration at the SANC as a General and primary health care nurse.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

##### **Specific selection criteria**

Registration at SANC as a community health nurse and primary health care nurse.

#### **HS8.9.4 Pass requirements**

The general regulations for master's degrees are applicable to this qualification.

#### **HS8.9.5 Curriculum**

A dissertation on an approved topic

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Dissertation: Primary Health Care Semester 1	NPH9X01
<b>Semester two</b>	
Dissertation: Primary Health Care Semester 2	NPH9X02

#### **HS8.10 MASTER OF NURSING SCIENCE IN MEDICAL AND SURGICAL NURSING: CRITICAL CARE (GENERAL) (M9N08Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

#### **HS8.10.1 Purpose**

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

## HS8.10.2 Outcome

Practice as an advanced clinical nurse specialist, leader, consultant and researcher

## HS8.10.3 Rules of access and admission requirements

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

### Additional selection criteria

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration as a general and critical care nurse with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

## HS8.10.4 Pass requirements

The general regulations for master's degrees are applicable to this qualification.

## HS8.10.5 Curriculum

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Critical Care Semester 1	NMD9X01
<b>Semester two</b>	
Dissertation: Critical Care Semester 2	NMD9X02

## HS8.11 [MASTER OF NURSING SCIENCE IN MIDWIFERY AND NEONATAL NURSING SCIENCE \(M9N11Q\)](#)

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

### HS8.11.1 Purpose

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

### HS8.11.2 Outcome

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

### HS8.11.3 Rules of access and admission requirements

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

#### Additional selection criteria

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration as a general nurse and midwife with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

### HS8.11.4 Pass requirements

The general regulations for master's degrees are applicable to this qualification.

### HS8.11.5 Curriculum

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Midwifery and Neonatal Semester 1	NMM9X01
<b>Semester two</b>	
Dissertation: Midwifery and Neonatal Semester 2	NMM9X02

### HS8.12 **MASTER OF NURSING SCIENCE IN PROFESSIONAL NURSING SCIENCE: ETHOS AND PROFESSIONAL PRACTICE (M9N14Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

#### HS8.12.1 Purpose

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

#### HS8.12.2 Outcome

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

#### HS8.12.3 Rules of access and admission requirements

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

### **Additional selection criteria**

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration as a general nurse with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

#### **HS8.12.4 Pass requirements**

The general regulations for master's degrees are applicable to this qualification.

#### **HS8.12.5 Curriculum**

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Ethos and Professional Practice Semester 1	NEP9X01
<b>Semester two</b>	
Dissertation: Ethos and Professional Practice Semester 2	NEP9X02

#### **HS8.13 MASTER OF NURSING SCIENCE IN PROFESSIONAL NURSING SCIENCE: NURSING EDUCATION (M9N16Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

##### **HS8.13.1 Purpose**

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

##### **HS8.13.2 Outcome**

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

##### **HS8.13.3 Rules of access and admission requirements**

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

### **Additional selection criteria**

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree. Passed nursing education at level 3 (NQF 8).
2. Proof of registration as a general nurse and nurse educator with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing

practitioner for the duration of the programme if necessitated by the research topic.

#### **HS8.13.4 Pass requirements**

The general regulations for master's degrees are applicable to this qualification.

#### **HS8.13.5 Curriculum**

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Nursing Education Semester 1	NED9X01
<b>Semester two</b>	
Dissertation: Nursing Education Semester 2	NED9X02

#### **HS8.14 MASTER OF NURSING SCIENCE IN PROFESSIONAL NURSING SCIENCE: NURSING MANAGEMENT (M9N15Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

#### **HS8.14.1 Purpose**

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/midwifery/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

#### **HS8.14.2 Outcome**

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

#### **HS8.14.3 Rules of access and admission requirements**

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

##### **Additional selection criteria**

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree. Passed nursing management at a level 3 (NQF 8).
2. Proof of registration as a general nurse and nurse manager with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

#### **HS8.14.4 Pass requirements**

The general regulations for master's degrees are applicable to this qualification.



## HS8.14.5 Curriculum

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Professional Nursing Management Semester 1	NSM9X01
<b>Semester two</b>	
Dissertation: Professional Nursing Management Semester 2	NSM9X02

## HS8.15 **MASTER OF NURSING SCIENCE IN PSYCHIATRIC MENTAL HEALTH NURSING (M9N18Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

### HS8.15.1 Purpose

The primary purpose of this qualification is to develop the intellectual and practical competencies of the qualifying student and to facilitate her/his professional values to promote the health of the individual, family, group and community as a specialist, leader and consultant in and as a member of the nursing/psychiatric/health team through her/his research, professional and clinical abilities. This qualification serves as a basis for advanced learning.

### HS8.15.2 Outcome

Practice as an advanced clinical nurse specialist, leader, consultant and researcher.

### HS8.15.3 Rules of access and admission requirements

At entrance level, the prospective student should have a Bachelor's degree with a minimum of 480 approved credits at level 8 or a post graduate diploma at NQF level 8.

#### **Additional selection criteria**

1. A minimum of 65% in the core modules in the undergraduate qualification in which the student intends to obtain the master's degree.
2. Proof of registration as a general nurse and post-basic psychiatric nurse with the SANC.
3. A candidate must be appointed in an approved full-time or part-time post as a nursing practitioner for the duration of the programme if necessitated by the research topic.

### HS8.15.4 Pass requirements

The general regulations for master's degrees are applicable to this qualification.

## HS8.15.5 Curriculum

A dissertation on an approved topic

Module name	Module code
<b>Semester one</b>	
Dissertation: Psychiatric Nursing Science: Semester 1	NPD9X01
<b>Semester two</b>	
Dissertation: Psychiatric Nursing Science: Semester 2	NPD9X02

## HS8.16 DOCTOR OF NURSING SCIENCE

Duration of programme

Full-time: Minimum 2 years and Maximum 4 years

Part-time: Minimum 2 years and Maximum 5 years

NQF Level 10, 360 Credits

Research thesis 100%

With specialisation choices in the following:

1. Community Nursing Science (P9N01Q)
2. Maternal and Child Nursing Science: Neonatal Nursing Science (P9N05Q)
3. Professional Nursing Science: Nursing Education (P9N14Q)
4. Psychiatric Mental Health Nursing Science (P9N02Q)
5. Professional Nursing Science (P9N03Q)
6. Community Health Nursing Science: Primary Health Care (P9N08Q)

### HS8.16.1 Purpose

The primary purpose of this qualification is to provide the qualifying student with advanced critical, analytical, problem-solving and reflective competencies as a nursing specialist to act as a leader and consultant in health services and to make an original contribution to the knowledge content of the discipline through independent research. The qualifying student should display insight into the module discipline, as well as into research. This should include competence in the oral and written communication of the research process and findings.

### HS8.16.2 Outcome

1. Expertise and critical knowledge in an area at the forefront of the field discipline or practice.
2. The ability to conceptualise new research initiatives and create new knowledge or practice.

**Additional Selection Criteria:**

#### 1. Community Health Nursing Science: (P9N01Q)

- 1.1. An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 1.2. Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by the Faculty Higher Degrees Committee of the University.
- 1.3. Registration as a Community Health Nurse with SANC.

**2. Medical and Surgical Nursing Science: Critical Care Nursing (General): (P9N06Q)**

- 2.1. An appropriate master's degree qualification in Advanced Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 2.2. Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by die Faculty Higher Degrees Committee of the University.
- 2.3. Registration as a Critical Care Nurse with SANC.

**3. Maternal and Child Nursing Science: Neonatal Nursing Science: (P9N05Q)**

- 3.1. An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 3.2. Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by die Faculty Higher Degrees Committee of the University.
- 3.3. Registered as an Advance Midwife and Neonatal Nurse with SANC.

**4. Professional Nursing Science: Nursing Education: (P9N14Q)**

- 4.1 An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 4.2 Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by die Faculty Higher Degrees Committee of the University.
- 4.3 Registration as a Post Basic Nurse Educator with SANC.

**5. Psychiatric Mental Health Nursing Science: (P9N02Q)**

- 5.1. An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 5.2. Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by die Faculty Higher Degrees Committee of the University.
- 5.3 Registration as a Psychiatric Nurse with SANC.

**6. Professional Nursing Science: (P9N03Q)**

- 6.1 An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 6.2 Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by the Faculty Higher Degrees Committee of the University.

**7. Community Health Nursing Science: Primary Health Care: (P9N08Q)**

- 7.1 An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 7.2 Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as

required by the Faculty Higher Degrees Committee of the University.  
7.3 Registration as a Primary Health Care Nurse with SANC.

## **8. Community Health Nursing Science: Occupational Health Nursing Science: (P9N09Q)**

- 8.1 An appropriate master's degree qualification in Nursing Science/Professional Practice. A student intending to enrol for a doctorate degree must have obtained a minimum of 65% in the completed master's degree programme.
- 8.2 Requirements for continued registration (usually during the second and third year of study): the student must demonstrate satisfactory progress with the thesis, as required by the Faculty Higher Degrees Committee of the University.
- 8.3 Registration as an Occupational Health Nurse with SANC.

### **HS8.16.3 Rules of access and admission requirements**

- 1. At entrance level, the prospective student should have a minimum of 180 approved credits at level 9.
- 2. The prospective student should have obtained a minimum of 65% in the completed master's degree programme.
- 3. Registration at SANC as a Nurse in the field that the speciality has been chosen if necessitated by the research topic.
- 4. PhD orientation programme will be by invitation and will not be compulsory for the selection to the programme. The programme adds value to the knowledge acquisition.

### **HS8.16.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

### **HS8.16.5 Curriculum**

A research thesis. The research component is 100%.

## **HS9.0      DEPARTMENT OF OPTOMETRY**

### **HS9.1      BACHELOR OF OPTOMETRY (B9O02Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

#### **HS9.1.1      Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to:

1. Perform visual examinations and relevant procedures included in the scope of Optometry (as stipulated by the Professional Board of Optometry and Dispensing Opticians) in the clinical environment as an optometrist.
2. Independently apply promotive, diagnostic and treatment strategies in a cost-effective manner appropriate to the needs of the community.
3. Use critical reasoning for holistic optometric management strategies in the diagnosis.
4. Establish a foundation for research and life skills for lifelong learning.

#### **HS9.1.2      Outcomes**

1. Apply thorough competency in professional and clinical responsibilities, scientific optometric skills, optical and allied technologies to ascertain the accuracy of the prescription of the eye care products to visually compromised people.
2. Apply scientific health care skills and optometric technologies in the interactive consultation of patient history while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct.
3. Apply scientific health care skills and optometric technologies in the examination of eye and eye related conditions within the context of health services appropriate to the needs of the community, while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct.
4. Interact consultatively in the diagnosis of eye and eye related conditions and delivery of eye care products, therapy and medication to visually compromised people, with knowledge of minimum standards of optometric care.
5. Interact consultatively in the management and delivery of eye care products, therapy and medication to visually compromised people, with knowledge of minimum standards of optometric care.
6. Record and maintain legible, secure data and patient information while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct stated in the patient charter.
7. Manage and administer human, technical and other resources to ensure optimal diagnosis, prescription and delivery of eye and visual care products or services.
8. Apply self-reflective learning strategies to continually improve the optometrically related service within health care services appropriate to the specific needs of the patient/client to ensure professional contribution to the needs of the society.

#### **HS9.1.3      Rules of access and admission requirements**

##### **Please note:**

The admission requirements stated below are the minimum requirements to be considered for selection. Even if all minimum requirements are met, due to selection being based on academic excellence and limited number of places available in the program, acceptance into the program is not assured.

1. Language requirements.
2. Students who register at UJ for the first time for the Bachelor of Optometry degree

presented through the medium of English must have obtained one of the following results (as the minimum) in their final Grade 12 examination: C symbol for English first Language, HG C symbol for English second Language, HG B symbol for English, SG.

3. Grade 12 Mathematics HG at least 60% (C Symbol).
4. Grade 12 Science HG at least 60% (C Symbol).
5. Grade 12 Biology HG at least 60% (C Symbol). Biology may be substituted with Grade 12 Physiology HG at least 60% (C Symbol).
6. Six (6) subjects will be considered.

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
31	5	5	Not accepted	5	5

### Selection criteria

The Department of Optometry of the University of Johannesburg accepts a limited number of students per academic year in line with the enrolment target of the University. The decision to limit numbers is based on available facilities in the Optometry Department, number of students qualifying nationally from other academic institutions as well as compliance with the rules and regulations of the Professional Board of Optometry and Dispensing Opticians. For these reasons, and the high academic demand of the course it is necessary to apply an academic selection process. The selection process targets the most successful students for this course.

Selection is based purely on academic results. Please read together with **HS9.1.3** regarding rules of access. Selection is done by the Student Enrolment Centre (SEC).

Provisional acceptance will be based on Grade 11 final marks. Students must however attain the minimum requirements as in **HS9.1.3** in order to maintain their selection.

Students applying from other Universities and students with other degrees will also be considered. The selection is based on academic performance and an average of 65% for all modules passed is required for consideration. Students applying from other Universities should be in good standing with that Institution and also comply with the minimum requirements of that of a Grade 12 applicant.

Selection takes place based on first semester academic results. If students do not maintain similar academic performance, selection will be forfeited.

The Department reserves the right to admit a student that may not meet the stipulated requirements as set out. Furthermore, admission is at the discretion of the Department.

As soon as selection and provisional acceptance are completed, students will be notified by the Student Enrolment Centre. Students that are not accepted will be referred to their second choices indicated on the application form.

Decisions taken are final and no exceptions will be made. No late applications will be

considered.

#### HS9.1.4 Pass requirements

1. The Academic Rules and Regulations of the University of Johannesburg should be read in conjunction with the additional requirements for the program in particular **AR5.11.1** and **AR5.11.4**.
2. Class attendance is guided by **AR5.11.1** which states that "Students are expected to attend each class unless they have a legitimate reason, and where appropriate, the necessary evidence thereof, for being absent. **AR5.11.4** states that "Students are expected to attend a minimum of 80% of tutorials.
3. In order to continue to the second academic year in Optometry, a student must pass all the prescribed modules for the first academic year of study.
4. Students repeating part of the second year, but with credits in Optometry 1 and Dispensing Optometry 1 theory must still attend all practical sessions in these subjects in order to retain their credits. Students repeating part of the third year, but with credits in Optometry 2 and Dispensing Optometry 2 theory, must attend all practical sessions in these subjects in order to retain their credits.
5. Diagnostic Drug Proficiency: All fourth year students in Optometry have to prove their competency in the practical administration of diagnostic drugs and the use of related diagnostic instruments. The required pass mark in this proficiency examination is 75%.
6. Clinical rotations to community clinics, public hospitals and the primary healthcare train (Phelophepa) are compulsory.
7. All modules must be completed successfully, number of patients and clinic hours as prescribed by the Professional Board of Optometry and Dispensing Opticians completed and a research project report submitted, in order to successfully complete the program.
8. The maximum time to complete the Bachelor in Optometry degree is 6 years.
9. A possible fifth academic year may be required for therapeutics and/or community service. On graduating and after completing the required exit level outcomes for the degree, learners must apply to the HPCSA for full registration to practice as an Optometrist.

#### HS9.1.5 Curriculum

First year		
Module name	Module code	Prerequisite code
Semester one		
Chemistry 1C	CEM1CA1	
Physics 1C	PHY1CA1	
Human Anatomy 1A	HAN01A1	
Psychology 1A	PSY1AA1	
Mathematics 1A	MAT01A1	
Semester two		
Physics 1D	PHY1DB1	PHY1CA1
Human Anatomy 1B	HAN01B1	HAN01A1



Psychology 1B	PSY1BB1	PSY1AA1
<b>Year Module</b>		
Introduction to Optometry	OPI00Y1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Human Physiology 2A	HPH02A2	HAN01A1 HAN01B1
Microbiology 2A	MCB01A2	
Statistical Methods 1A	SMT01A1	
<b>Semester two</b>		
Human Physiology 2B	HPH02B2	HAN01A1 HAN01B1 HPH02A2
Biochemistry 1B	BIC01B1	
<b>Year modules</b>		
Ophthalmic Optics	OOP00Y2	PHY1CA1 MAT01A1 PHY1DB1 OPI00Y1
Dispensing Optometry 1	DOP00Y2	PHY1CA1 MAT01A1 PHY1DB1
Optics	OPO00Y2	PHY1CA1 MAT01A1 PHY1DB1
Optometry 1 Practical	OPP00Y2	PHY1CA1 MAT01A1 OPI00Y1 PHY1DB1
Optometry 1 Theory	OPT00Y2	PHY1CA1 MAT01A1 OPI00Y1 PHY1DB1
General Pathology for Optometry	OPA00Y2	HAN01A1 HAN01B1 CEM1CA1



Third year		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Ocular Anatomy and Physiology 3A	OAF03A3	HAN01A1 HAN01B1 HPH02A2 HPH02B2 OPA00Y2
<b>Semester two</b>		
Ocular Anatomy and Physiology 3B	OAF03B3	HAN01A1 HAN01B1 HPH02A2 HPH02B2 OPA00Y2 OAF03A3
<b>Year modules</b>		
Binocular Vision 1	BVI00Y3	OPP00Y2 OPT00Y2
Contact Lenses 1	CTL00Y3	OPP00Y2 OPT00Y2 BIC01B1 OPO00Y2 OOP00Y2 MCB01A2
Optometry 2 Practical	OPP00Y3	OPP00Y2 OPT00Y2 DOP00Y2 OPO00Y2
Optometry 2 Theory	OPT00Y3	OPP00Y2 OPT00Y2 DOP00Y2 OPO00Y2
Dispensing Optometry 2	DOP00Y3	DOP00Y2 OPP00Y2 OPT00Y2
Paediatric Optometry 1	PED00Y3	OPP00Y2 OPT00Y2 PSY1AA1 PSY1BB1
General and Ocular Pharmacology	OPH00Y3	OPA00Y2 HAN01A1 HAN01B1 HPH02A2 HPH02B2 MCB01A2

Ocular Pathology 1	OPA00Y3	OPA00Y2 OPP00Y2 OPT00Y2 MCB01A2 HPH02A2 HPH02B2
<b>Fourth year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year modules</b>		
Binocular Vision 2	BVI00Y4	BVI00Y3 OPP00Y3 OPT00Y3
Contact Lenses 2	CTL00Y4	CTL00Y3 OPP00Y3 OPT00Y3 OPH00Y3 OPA00Y3
Low Vision 1	LVI00Y4	OPP00Y3 OPT00Y3 OPA00Y3
Ocular Pathology 2	OPA00Y4	OPA00Y3 OPH00Y3 OPP00Y3 OPT00Y3
Paediatric Optometry 2	PED00Y4	PED00Y3 BVI00Y3 OPP00Y3 OPT00Y3 CTL00Y3
Optometry 3 Research Methods	OPP00Y4	OPP00Y3 OPT00Y3 BVI00Y3 PED00Y3 CTL00Y3
Optometry 3 Theory	OPT00Y4	OPP00Y3 OPT00Y3 BVI00Y3 PED00Y3 CTL00Y3
Community and Environmental Optometry	COB01Y4	OPP00Y3 OPT00Y3
Business Practice, Ethics and Jurisprudence	COB02Y4	OPP00Y3 OPT00Y3

## **HS9.2**      **MASTER OF HEALTH SCIENCES (OPTOMETRY) (M9OT1Q)**

### **Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits (HEQF aligned)**

**Research dissertation 100%**

### **HS9.2.1**      **Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to:

1. Perform independent scientific research with an original component.
2. Contribute to knowledge of and insight into optometry as well as the specific discipline of research.
3. Display skills in related research methodologies and in proper formulation through a Master's dissertation.
4. Only a Research Masters can be done.

### **HS9.2.2**      **Outcomes**

The students will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Report research findings at the appropriate level.
6. Make conclusions, suggestions and recommendations based on the data collected that are reasonable and justifiable.

### **HS9.2.3**      **Rules of access and admission requirements**

A Bachelor's degree in Optometry (or equivalent).

### **HS9.2.4**      **Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

### **HS9.2.5**      **Curriculum**

A research dissertation on an approved topic:

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Dissertation: Optometry Semester 1	DOT9XA1
<b>Semester two</b>	
Dissertation: Optometry Semester 2	DOT9XB1

### **HS9.3      DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: OPTOMETRY (P9HS4Q)**

#### **Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF Level 10, 360 Credits**

**Research thesis 100%**

#### **HS9.3.1      Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to:

1. Perform independent, original and creative scientific research.
2. Contribute significant knowledge to and insight into optometry as well as the specific discipline of research.
3. Display skills in related research methodologies and in proper formulation through a doctoral dissertation.
4. Reflect upon decision-making, self-directedness and contributions to optometric science.
5. Only a Research Doctorate can be done.

#### **HS9.3.2      Outcomes**

The student will be able to:

1. Identify and/or create an original research problem.
2. Design, construct and execute a research project at the highest level.
3. Collect appropriate data in a precise and logical manner and evaluate and judge the information obtained.
4. Acquire learning abilities in the research context including the assessment of scientific literature, construction of a research project, execution of project, analysis of data and producing sound scientific arguments.
5. Make relevant conclusions based on the data collected that are reasonable and justified.

#### **HS9.3.3      Rules of access and admission requirements**

A relevant Master's degree.

Refer to the Academic Regulations of the University of Johannesburg.

#### **HS9.3.4      Pass requirements**

1. In conjunction with the research supervisor/s, the Department of Optometry Research Committee shall appoint for each thesis three examiners, who shall be responsible for external examination.
2. A minimum of one of the external examiners shall be based external to the country.

#### **HS9.3.5      Curriculum**

1. A student for a Doctoral degree shall be required to pursue an approved programme of research on some subject falling within the scope of the studies represented in the Department of Optometry.
2. Such programme shall make a distinct contribution to the knowledge or understanding of the subject and afford evidence of originality shown either by the discovery of new facts and/or by the exercise of independent critical power.

A research thesis. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Optometry)	RPO10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Optometry)	RPO10X2

## **HS10.0      DEPARTMENT OF PODIATRY**

### **HS10.1      BACHELOR OF HEALTH SCIENCES IN PODIATRY (B9P01Q)**

**Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

#### **HS10.1.1      Purpose**

The purpose of the qualification is to produce professional podiatry graduates competent in the knowledge and skills required for managing and providing an integrated, holistic scientifically based podiatric health care service to all sectors of society. The qualification develops reflective, caring practitioners capable of integrating principles, theory, proven techniques, and relevant clinical skills in the delivery of a service focusing on promotion of foot health, prevention, diagnosis, treatment and rehabilitation of foot and lower limb related problems. Skills developed in scientific enquiry, critical thinking and problem-solving enable graduates to conduct research, undertake further study and become life-long learners. Graduates register with the HPCSA entitling them to practice independently and within a multidisciplinary team in the private or public health sector or in education, research, occupational health, and corporate sector.

#### **HS10.1.2      Outcomes**

**ELO 1** Demonstrate competency in the performance of routine and specialised podiatric skills and techniques to clinically assess, diagnose, treat and manage conditions and/or pathologies affecting the foot and lower limb.

**ELO 2** Apply the principles, proven techniques and specialised skills required for the delivery and promotion of foot health and the prevention and rehabilitation of the foot and lower limb problems.

**ELO 3** Recognise and appraise the signs and symptoms of systemic conditions that impact on the foot and lower limb for the purpose of treatment, referral and subsequent management.

**ELO 4** Manage a clinical practice and deliver evidence based podiatric services within the public or private healthcare environment effectively, demonstrating professionalism and an entrepreneurial ability.

**ELO 5** Demonstrate the application of pertinent knowledge of the psycho-social, biological and basic sciences to podiatric practice.

**ELO 6** Apply knowledge of Health and Safety regulations; Code/s of Practice; Ethics; Human Rights and Medical Law in the optimal performance of podiatric practice.

**ELO 7** Develop research skills and conduct research within a podiatric context in order to contribute to the development of the profession, continue with lifelong learning and become a reflective practitioner.

### HS10.1.3 Rules of access and admission requirements

A Senior Certificate with Matriculation exemption, or an equivalent qualification at an equivalent standard as determined by a Status Committee, with the following:

1. English with at least a Higher Grade D or Standard Grade C symbol and,
2. Two of the following compulsory subjects:
  - 2.1 Biology with at least a Higher Grade D or Standard Grade C symbol.
  - 2.2 Physical Science with at least a Higher Grade D or Standard Grade C symbol.
  - 2.3 Mathematics with at least a Higher Grade D or Standard Grade C symbol.

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy	Physical Sciences	Life Sciences
28	5	4	Not accepted	4	4

### HS10.1.4 Specific rules and regulations for Podiatry students

1. Students must familiarize themselves with the internal rules and regulations of the Department. These rules and regulations, are set out in the Department's Clinical Conduct Guidelines, are binding.
2. The programme is not offered as a part time or distance- learning programme. Students who are in full time employment will be unable to continue with their studies.
3. All students (even if not registered for Clinical Practice within that academic year) are required to see a minimum number of patients each year as determined by the department whilst they are registered. This is a requirement to ensure that clinical competencies are retained.
4. Final (4<sup>th</sup>) year students who fail any module or fail to complete their research project are required to register for Clinical Practice Practical module the following year even if they have passed this module to ensure that clinical competencies are retained as per HPCSA requirements.
5. All registered students are required to attend clinics as rostered and must provide reasons in writing for non-attendance of clinics. If a student fails to attend a rostered clinic, he/she must plan with the year coordinator for make-up clinic shift.
6. Students are required to adhere to the requirements of the department relating to personal appearance and dress code during clinics.

#### Clinical practice (Work integrated learning)

1. Students must, by the end of each year, complete the clinical hour requirements which are detailed in the Clinical Practice Practical 1, 2, 3 and 4 Learner Guides.
2. Clinical practice practical/placement is integrated into the academic programme and developed in conjunction with the mutual assistance of clinical training partners, for this reason, clinical rosters cannot be personalized.
3. Attendance of all rostered clinics, clinical workshops and practicals is compulsory and failure to comply will lead to disciplinary action.
4. During the four-year of study, students must perform clinical work in the University of Johannesburg Podiatry clinic and at other clinical training sites around Gauteng.

### HS10.1.5 Pass requirements

1. Students are promoted:
  - 1.1 To full second-year status if they have passed all the first-year modules.
  - 1.2 To full third-year status if they have passed all the second-year modules.
  - 1.3 To the fourth year of study if they have passed all third-year modules.
2. Clinical Practice modules credits are retained provided that both the theory and practical modules are passed during the same academic year. Students who fail either the theory or the practical component of Clinical Practice cannot retain credits for the passed component and will be required to re-register for both the theory and practical modules the following year. Students retain credits for all other modules passed.
3. Due to the integrated nature of the theory and practical modules, 80% attendances of all theoretical classes are mandatory. Students will have to provide reasons in writing for non-attendance of classes.
4. Students may register for a module in the following year, provided that:
  - 4.1 The prerequisite modules were passed.
  - 4.2 The module selection does not lead to timetable clashes.
  - 4.3 The module is not a clinical/practical module.
5. In order to gain re-admission to the programme first year students must pass a minimum of 60% (i.e., 5 of the 7) of first year modules.
6. Students may not register for the same module for a third time without permission from the Head of Department and Executive Dean.
7. 100% attendance of and participation in, the practical and experiential components are compulsory. If students fail to comply with this requirement, they will fail the practical.
8. Students have a maximum of 6 years to complete the four-year degree.

### HS10.1.6 Curriculum

First year		
Module name	Module code	Prerequisite code
Semester one		
Basic Science: Physics	PHB1AA1	
Semester two		
Basic Science: Chemistry	CHB1BB1	
Year modules		
Anatomy and Physiology	ANTPHY1	
Clinical Practice 1 Practice	CLPPHY1	
Human Sciences	HUMSHY1	
Medical Sciences	MEDSHY1	
Podiatric Medicine 1 Theory	PDMTHY1	

<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Podiatric Anatomy 2 (Theory)	PDATHA2	ANTPHY1
Podiatric Anatomy 2 (Practical)	PDAPHA2	ANTPHY1
<b>Year Modules</b>		
Clinical Practice 2 (Theory)	CLPTHY2	PDMTHY1 CLPPHY1 MEDSHY1
Clinical Practice 2 (Practice)	CLPPHY2	PDMTHY1 CLPPHY1 MEDSHY1
Podiatric Orthotics 2 (Theory)	PDOOTHY2	PDMTHY1 CLPPHY1
Podiatric Orthotics 2 (Practice)	PDOPHY2	PDMTHY1 CLPPHY1
Podiatric Medicine 2	PDMTHY2	PDMTHY1 CLPPHY1 MEDSHY1
Physiology 2	PHYGHY2	ANTPHY1 PDMTHY1 CLPPHY1
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year Modules</b>		
Clinical Practice 3 (Theory)	CLPTHY3	CLPTHY2 PDOOTHY2 PHYGHY2
Clinical Practice 3 (Practice)	CLPPHY3	CLPPHY2 PDOPHY2 PDMTHY2
Introduction to Pharmacology	INTPHY3	CLPTHY2 PDMTHY2 PHYGHY2
Pathology and Medicine	PATMHY3	CLPTHY2 PDMTHY2 PHYGHY2



Podiatric Medicine 3	PDMNHY3	CLPTHY2 PDMTHY2 PDOTHY2
Podiatric Surgery	PODSHY3	PDMTHY2 PDOTHY2 CLPTHY2
Research Methodology	REMPHY3	
<b>Fourth year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Private Practice Management	PPMPHA4	CLPTHY3 CLPPHY3
<b>Semester two</b>		
Health Management Systems	HMSPHB4	CLPTHY3 CLPPHY3
<b>Year Modules</b>		
Applied Pharmacology	APPHSY4	INTPHY3 CLPTHY3 PDMNHY3 PATMHY3
Clinical Practice 4 (Practical)	CLPHSY4	CLPTHY3 CLPPHY3 INTPHY3 PATMHY3 PDMNHY3
Clinical Practice 4 (Theory)	CLPTHY4	CLPTHY3 CLPPHY3 INTPHY3 PATMHY3 PDMNHY3
Pod Med: 4 Podogeriatrics	PDMGHY4	CLPTHY3 CLPPHY3 INTPHY3 PATMHY3 PDMNHY3
Pod Med: Podopaediatrics	PDMPHY4	CLPTHY3 CLPPHY3 INTPHY3 PATMHY3 PDMNHY3
Pod Med: Sports Medicine	PDMSHY4	CLPTHY3 CLPPHY3 INTPHY3 PATMHY3

Research Project and Dissertation	REPPHY4	REMPHY3
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## **HS10.2     MASTER OF HEALTH SCIENCES: PODIATRY (M9PD1Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF level 9**

**Research dissertation 100%**

### **HS10.2.1     Purpose**

The primary purpose of this qualification is to provide qualifying students with the ability to:

1. Perform independent scientific research with an original component.
2. Contribute to knowledge of and insight into podiatry as well as the specific discipline of research.
3. Display skills in related research methodologies and in proper formulation through a Master's dissertation.
4. Reflect upon decision-making, self-directedness and contributions to podiatric science.

### **HS10.2.2     Outcomes**

The student will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Report research findings at the appropriate level.
6. Make conclusions, suggestions and recommendations based on the data collected that are reasonable and justifiable.

### **HS10.2.3     Rules of access and admission requirements**

A Bachelor's degree in Podiatry or an equivalent qualification in Podiatry at an equivalent standard as determined by a Status Committee and approved by the Faculty Board.

Applicants should be registered with the HPCSA as a Podiatrist and have at least a minimum of one-year clinical experience.

The Department require a two-page synopsis of the research topic and methodology before the student is allowed to register or commence with his/her Master's studies.

#### **Selection criteria**

Selection will be based on:

- Consideration of a draft proposal by the Department's Research Committee.
- Prior academic performance
- Structured personal interview

#### HS10.2.4 Pass requirements

Pass mark of 50% for the dissertation.

#### HS10.2.5 Curriculum

A research project and a dissertation: The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Dissertation: Health Sciences (Podiatry)	DPD9XA1
<b>Semester two</b>	
Research Project and Dissertation: Health Sciences (Podiatry)	DPD9XB1

#### HS10.3 DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: PODIATRY (P9HS5Q)

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF level 10, 360 Credits**

**Research thesis 100%**

##### HS10.3.1 Purpose

To develop podiatry graduates that can make original contribution to podiatry knowledge and healthcare in general through conducting and disseminating high quality novel research to support and enhance the evidence-base for podiatry.

##### HS10.3.2 Outcomes

On completion of this qualification, the graduate should be able to demonstrate:

1. broad knowledge and systematic understanding of research as well as advanced and up-to-date specialised knowledge in podiatry,
2. familiarity with research methodology in general and the methods of podiatric and healthcare research in particular,
3. the capacity for scholarly analysis and synthesis as well as an ability to review and assess new and complex phenomena, issues and situations independently and critically,
4. intellectual autonomy and disciplinary integrity as well as the ability to make assessments of research ethics,
5. the ability to identify and formulate research problem with scholarly precision critically, independently, and innovatively, and to plan and use appropriate methods to undertake original research,
6. through a dissertation the ability to make a significant contribution to the production of knowledge through his or her own research,
7. the ability in both national and international contexts to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general,
8. the ability to identify the need for further knowledge,
9. specialised insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and
10. the capacity to contribute to social development and support the learning of others both through research and education and in professional capacity.

### HS10.3.3 Rules of access and admission requirements

#### Selection criteria

1. A Master's degree in Podiatry or an equivalent qualification with a minimum of 65% for the dissertation.
2. A minimum of three years clinical experience.
3. Candidates will be required to submit an outline research proposal.
4. Selection process is based on consideration of the research proposal for the PhD, the availability of a suitable supervisor, and an evaluation of the theoretical and methodological expertise required to complete the study.

### HS10.3.4 Pass requirements

Pass mark of 50% for the thesis.

### HS10.3.5 Curriculum

A research thesis. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Podiatry)	RPP10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Podiatry)	RPP10X2

## HS11.0 DEPARTMENT OF SPORT AND MOVEMENT STUDIES

### HS11.1 HIGHER CERTIFICATE IN SPORT ADMINISTRATION (F9SA1Q)

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**NQF Level: 5, 120 Credits**

#### HS11.1.1 Purpose

The purpose of the Higher Certificate in Sport Administration is to provide learners with knowledge, skills and competencies to ensure professional, ethical and effective administration of sport clubs and events. This will be ensured through education and training in the principles of club administration, facility, competition and event administration, marketing, human resources, financial, coaching administration.

#### HS11.1.2 Outcomes

Students should be able to:

1. Develop a personal philosophy, vision and code of conduct for the administration of sport clubs.
2. Demonstrate knowledge, skills and competencies in the administration of the human resources, finances, marketing and legal aspects of sport clubs.
3. Demonstrate knowledge, skills and competencies in the administration of sport facilities that includes turf administration, maintenance, scheduling and booking, equipment and risk administration.

4. Apply knowledge, skills and competencies in the administration of sport events and competitions, including for people with disability.
5. Develop leadership skills and competencies within a framework of ethical behaviour.

### HS11.1.3 Rules of access and admission requirements

A National Senior Certificate (Grade 12) or equivalent qualification or relevant experience in the sport industry as determined by the RPL committee and in line with the UJ's RPL policy. Proficiency in English.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and learning (English)	Subject 1	Subject 2	Subject 3
18	3	3	3	3

*\*National certificate endorsement*

### Selection criteria

The Department of Sport and Movement Studies base selection on academic merit and availability of places in the programme.

### HS11.1.4 Pass requirements

Students are promoted:

1. When all modules are passed with a final mark of 50% and higher.
2. Students retain credit for all modules passed.
3. Students must re-apply for continuation of their studies if they failed to pass an accumulative total of modules of at least:
  - 3.1 Three (3) modules after the first semester of study.
  - 3.2 Seven (7) Modules after the first year of study.
4. Work integrated learning: Students must accumulate 150 hours of approved practical work over the year.
5. First Aid Level 1: Students must complete the First Aid Level 1 course at a Departmental approved service provider.

### HS11.1.5 Curriculum

First year		
Module Name	Module code	Prerequisite code
Semester one		
Communication and Computer Literacy	CCLSAA1	See admission requirements.
Human Resource Administration in a Sport Club	HRASAA1	

Introduction to Sport Marketing and Administration	IMASAA1	
Principles and Administration of Coaching	PACSAA1	
Self-Management and Personal Skills Development	SMDSAA1	
<b>Semester two</b>		
First Aid Level 1	FALSAB1	
Financial Administration in Sport	FASSAB1	
Introduction to Sport Law	ISLSAB1	
People with Disability in Sport	PDSSAB1	
Sport Leadership and Ethics	SLESAB1	
<b>Year Modules</b>		
Facility, Competition and Event Administration	FCESAY1	
Sport and Club Administration	SCASAY1	
Work integrated learning (WIL)	WILSAY1	

## HS11.2 [HIGHER CERTIFICATE SPORT COACHING AND EXERCISE SCIENCES \(F9SC2Q\)](#)

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**NQF Level: 5, 120 Credits**

### HS11.2.1 **Purpose**

The purpose of the Higher Certificate in Sport Coaching and Exercise Science is to provide sport coaches with knowledge and competencies to ensure that athletes are coached within a holistic framework of athlete development of the four domains for coaching (children, participation for adolescents and adults, emerging and talented athletes and high-performance athletes). This will be ensured through the principles of coaching science, the knowledge of human sport performance, exercise physiology, developing the skills to identify common sports injuries and personal development.

### HS11.2.2 **Outcomes**

Students should be able to:

1. Develop a personal coaching philosophy, vision and code of conduct.
2. Design and conduct basic fitness training protocols within the four domains of coaching.
3. Acquire the knowledge and skills to prevent common sport related injuries during coaching.
4. Identify key legal aspects and risks factors within the coaching and sport context.
5. Debate the key requirements for starting a sport club.
6. Develop a basic knowledge and understanding of sport facility and event management principles.

### HS11.2.3 Rules of access and admission requirements

A National Senior Certificate (Grade 12) or equivalent qualification or relevant experience in the sport industry as determined by the RPL committee and in line with the UJ's RPL policy. Proficiency in English.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and learning (English)	Subject 1	Subject 2	Subject 3
18	3	3	3	3

*\*National certificate endorsement*

### Selection criteria

The Department of Sport and Movement Studies base selection on academic merit and availability of places in the programme.

### HS11.2.4 Pass requirements

Students are promoted:

1. When all modules are passed with a final mark of 50% and higher.
2. Students retain credit for all modules passed.
3. Students must re-apply for continuation of their studies if they failed to pass an accumulative total of modules of at least:
  - 3.1 Three (3) modules after the first semester of study.
  - 3.2 Seven (7) modules after the first year of study.
4. Work integrated learning: Students must accumulate 100 hours of approved practical work over the year.
5. First Aid Level 1: Students must complete the First Aid Level 1 course at a Departmental approved service provider.

### HS11.2.5 Curriculum

First year		
Module Name	Module code	Prerequisite code
Semester one		
Basic Injury Prevention	BIPSCA1	See admission requirements.
Communication and Computer Literacy	CCLSCA1	
Sport Club Administration	SCASCA1	
Self-Management and Personal Skills Development	SMDSAA1	

<b>Semester two</b>		
Basic Coaching Science	BCSSCB1	
First Aid Level 1	FALSAB1	
Introduction to Sport Law	ISLSAB1	
People with Disability in Sport	PDSSAB1	
Sport Leadership and Ethics	SLESAB1	
<b>Year Modules</b>		
Basic Anatomy and Physiology	BAPSCY1	
Coaching in the Four Domains	CFDSCY1	
Facility, Competition and Event Management	FCESAY1	
Work Integrated Learning (WIL)	WILSCY1	

**HS11.3 DIPLOMA IN SPORT MANAGEMENT (D9S01Q)**  
**Duration of programme**  
**Full-time: Minimum 3 years and Maximum 5 years**  
**NQF Level 6, 360 Credits**

**HS11.3.1 Purpose**

Students will acquire knowledge and practical competencies in the administration and management of small sport enterprises as well as to reflect on their decisions made. More specifically, they will obtain those competencies in the functional aspects of management.

**HS11.3.2 Outcomes**

1. Students should be able to implement the functional management competencies in order to manage a small sport enterprise.
2. Students should be able to organise a sport club event utilizing the principles of event management.
3. Students should be able to do the administration of a small sport enterprise.
4. Students should be able to plan and implement a marketing plan for an event or small sport enterprise.

**HS11.3.3 Rules of access and admission requirements**

An FETC, Senior Certificate or an equivalent qualification at NQF 4 as determined by a Status Committee, with the following subjects:

1. Compulsory subject English with at least a Higher Grade E or Standard Grade D symbol.
2. Students who have successfully completed the Higher Certificate in Sport Administration or the Higher Certificate in Sport Coaching and Exercise Science may also be eligible for admission into the Diploma in Sport Management, provided that they have completed the required Grade 12 subjects according to the entry requirements of the Diploma.



A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and	Mathematics	Mathematical Literacy	Life Sciences	Physical Sciences
<b>21 with Mathematics 22 with Mathematical Literacy</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>Not applicable</b>	<b>Not applicable</b>

### Selection criteria

The Department of Sport and Movement Studies base selection on academic merit and availability of places in the programme.

### HS11.3.4 Pass requirements

Students are promoted:

1. To the second year of study if they have passed at least 2 modules (from either Sport Management 1A and B; or Business Management 1A and B), plus 2 other modules; to the third year of study if they have passed at least 10 modules, including Sport Management 2 and Business management 2.
2. Students must take all outstanding modules of the previous year of study before they may take modules of the following year of study, limited to a maximum of 6 modules in any one year of study.
3. Students retain credit for all modules passed.
4. Students must re-apply for continuation of their studies if they failed to pass an accumulative total of modules of at least:
  - 4.1. 3 modules after the first semester of study (one must be Sport Management 1A or Business Management 1A).
  - 4.2. Modules after the first year of study.
  - 4.3. 12 Modules after the second year of study.
  - 4.4. 18 Modules after the third year of study.
5. Work integrated learning: Students must accumulate 900 hours of approved practical work over their three years of study in Sport Management 1C, 2C and 3C. The Department will monitor and evaluate the student's progress.

### HS11.3.5 Curriculum

First year		
Module Name	Module code	Prerequisite code
<b>Semester one</b>		
Marketing 1A	MAR01A1	See admission requirements.
Business Management 1A	BMA01A1	
English 1A	PME1AA1	
Sport Management 1A	STM1AA1	

Semester two		
Marketing 1B	MAR01B1	
Sport Management 1B	STM1BB1	
English 1B	PME1BB1	
Business Management 1B	BMA01A1	
Year Modules		
Sport Management 1C	STM11Y1	
Second year		
Module Name	Module code	Prerequisite code
Semester one		
Marketing 2A	MAR02A2	MAR01A1 MAR01B1
Sport Management 2A	STM2AA2	STM1AA1 STM1BB1 STM11Y1
Public Relations 1A	PRL1AA1	
End-User Computing A	EUC01A1	
Business Management 2A	BMA02A2	BMA01A1 BMA01B1
Semester two		
Marketing 2C	MAR02C2	MAR01A1 MAR01B1
Sport Management 2B	STM2BB2	STM1AA1 STM1BB1 STM11Y1
Public Relations 1B	PRL1BB1	
End-User Computing B	EUC01B1	
Business Management 2B	BMA02B2	BMA011A BMA01B1
Year Modules		
Sport Management 2C	STM22Y2	STM1AA1 STM1BB1 STM11Y1

Third year		
Module Name	Module code	Prerequisite code
<b>Semester one</b>		
Sport Management 3A	STM3AA3	STM2AA2 STM2BB2 STM22Y2
Sport and Physical Recreation Studies 3A	SPR3AA3	
Business Management 3A	BMA03A3	BMA02A2 BMA02B2
<b>Semester two</b>		
Sport Management 3B	STM3BB3	STM2AA2 STM2BB2 STM22Y2
Sport and Physical Recreation Studies 3B	SPR3BB3	
Business Management 3B	BMA03B3	BMA02A2 BMA02B2
<b>Year Modules</b>		
Sport Management 3C	STM33Y3	STM2AA2 STM2BB2 STM22Y2

#### **HS11.4 BACHELOR OF COMMERCE IN SPORT MANAGEMENT (B9S14Q)**

**Duration of programme**

**Full-time: Minimum 3 years and Maximum 5 years**

**NQF Level 7, 360 Credits**

##### **HS11.4.1 Purpose**

The student should develop applied competencies in the mastering, analysis, interpretation and application of management principles in the fitness and health, coaching, teaching and retailing sectors of the sport industry.

##### **HS11.4.2 Outcome**

Students will develop the ability to internalize, reflect on, and communicate strategic decisions and applications effectively through the correct and suitable use of scientific language and technical terminology associated with sport management. The qualification will facilitate effective learning through exposure to, and the application of, appropriate learning styles, thereby enabling them to navigate and holistically manage the dynamic context of sport management.

##### **HS11.4.3 Rules of access**

A Senior Certificate, or an equivalent qualification at an equivalent standard as determined by a Status Committee.

A National Senior Certificate (NSC) - APS Score with minimum requirements as shown below:

(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and Learning (English)	Mathematics	Mathematical Literacy or Technical Mathematics	Physical Sciences	Life Sciences
23	4	4	Not accepted	Not applicable	Not applicable

*\*Mathematics (HG) must be minimum D (50%+) or Mathematics (SG) must be minimum C (60%+)*

#### HS11.4.4 Pass Requirements

To be admitted to any module in the second or third academic year of study, and progress to the following year of study, students must have passed at least 60% of the modules in the previous year of studies.

#### HS11.4.5 Curriculum

First year		
Module name	Module code	Prerequisite code
<b>Semester one</b>		
Analytical Techniques A	ATE01A1	
Industrial Psychology 1A	IPS11A1	
Kinesiology 1A	KIN01A1	
Sport Administration 1A	SPA01C1	
Anatomy & Physiology 1A	ANP01A1	
Business Management 1A	BMA11A1	
<b>Semester two</b>		
Analytical Techniques B	ATE01B1	ATE01A1
Industrial Psychology 1B	IPS21B1	
Kinesiology 1B	KIN01B1	
Sport Practice 1D	SPP01D1	
Anatomy & Physiology 1A	ANP01B1	
Business Management 1B	BMA21B1	

<b>Second year:</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Industrial Psychology 2A	IPS12A2	
Didactics and Exercise Science 2A	DES02A2	
Sport Management 2C	SPM02C2	
Business Management 2A	BMG02A2	BMA11A1
<b>Choose one of the following elective modules</b>		
Economics 1A	ECO01A1	
<b>OR</b>		
Accounting A	ACC0AA1	
<b>Semester two</b>		
Industrial Psychology 2B	IPS22B2	
Exercise Science 2B	EXS02B2	
Practical Aspects 2E	PRA02E2	
Leisure and Sport Tourism Studies 2D	LST02D2	
Business Management 2B	BMG02B2	BMA21B1
<b>Choose one of the following elective modules</b>		
Economics 1B	ECO01B1	
<b>OR</b>		
Accounting B	ACC0BB1	ACC0AA1
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Industrial Psychology 3A	IPS13A3	
Sport Psychology and Perceptual Motor Learning 3A	SPP03A3	
Sport Marketing and Finance 3C	SFM03C3	

Business Management 3A	BMA13A3	
<b>Semester two</b>		
Industrial Psychology 3B	IPS23B3	IPS11A1 IPS22B2
Sport Sociology 3B	SPS03B3	
Work Integrated Learning 3E	WIL03E3	
Facility, Event and Human Resource Management in Sport 3D	FEH03D3	
Business Management 3B	BMG03B3	

## HS11.5 **BACHELOR OF HEALTH SCIENCES IN SPORT AND EXERCISE SCIENCES (B9SE1Q)**

**Duration programme**

**Full-time: Minimum 3 years and Maximum 5 years**

**NQF Level 7, 360 Credits**

### HS11.5.1 **Purpose**

The purpose of this qualification is to develop competent sport and exercise scientists to ensure that the identification, development and performance of athletes are carried out professionally, effectively with a scientific background and an ethical approach.

### HS11.5.2 **Outcomes**

This will be ensured by applying the principles, knowledge and skills of sport and exercise science, which will be assessed against the set outcomes of the programme. These graduates will fill an important gap in the fitness industry and health promotion needs of the community, especially as statistics indicate the prevalence of non-communicable diseases faced in South Africa and will further play a pivotal role in coaching science, hence the enhancement of sport performance in South Africa.

### HS11.5.3 **Rules of access and admission requirements**

A Senior Certificate, or an equivalent qualification at an equivalent standard as determined by a Status Committee.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and learning (English)	Mathematics	Mathematical Literacy	Life Sciences
<b>27 with Mathematics 28 with Mathematical Literacy</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>4</b>

#### HS11.5.4 Pass requirements

To be admitted to any module in the second academic year of study, and progress to the following year of study, students must have passed at least 60% of the modules in the previous year of studies.

#### HS11.5.5 Curriculum

First year		
Module name	Module code	Prerequisite
Semester one		
Kinesiology 1A	KINSH1A	See Admission Requirements
Psychology 1A: Fundamentals	PSY1AA1	
Semester two		
Didactics and Coaching Science 1B	DICSH1B	
Health and Wellness Promotion 1B	HWPSH1B	
Psychology 1B: Fields of Psychology	PSY1BB1	
Sport and Exercise Practice 1B	SEPSH1B	
Year module		
Anatomy and Physiology 1	ANPSHY1	
Second year		
Module name	Module code	Prerequisite
Semester one		
Nutrition 1A	NUT012A	
Principles of Coaching 2A	PRCSH2A	
Psychology 2A: Developmental Psychology	PSY2AA2	PSY1AA1 PSY1BB1
Applied Physiology 2A	APHSH2A	
Applied Sport and Exercise Psychology 2A	ASPSH2A	
Semester two		
Applied Physiology 2B	APHSH2B	

Health and Wellness Promotion 2B	HWPSW2B	
Psychology 2D: Positive Psychology	PSY2DB2	PSY2AA2
<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Health and Wellness Promotion 3A	HWPSH3A	
Psychology 3A: Research Psychology	PSY3AA3	PSY2DB2
Talent Identification and Long-Term Athlete Development 3A	TIDSH3A	
Sport and Exercise Science 3A	SESSH3A	
Motor Learning 3A	MTLSH3A	
<b>Semester two</b>		
Sport and Exercise Science 3B	SESSH3B	
Sport and Exercise Science Practice 3B	SEPSH3B	
Notational Analysis and Exercise Programming 3B	NAPSH3B	
Psychology 3D: Psychopathology 3	PSY3DB3	PSY3AA3

## **HS11.6      BACHELOR OF BIOKINETICS (B9S05Q)**

### **Duration of programme**

**Full-time: Minimum 4 years and Maximum 6 years**

**NQF Level 8, 480 Credits**

### **HS11.6.1      Purpose**

The qualification serves as the foundational and core knowledge base to register as a Biokineticist with the Health Professions Council of South Africa (HPCSA). The acquisition of professional abilities such as competence, skills, values and attitudes is fostered to enable the graduate to work as a health care professional. Competent and qualified Biokineticists are able to work in a variety of settings, including the public and private sector and in both urban and rural settings. Biokineticists primarily utilise their professional expertise in exercise testing and prescription, physical activity and health education to enhance/promote health in general, and to prevent dysfunction, restore and maintain an individual's functional ability, particularly in respect of orthopaedic injuries and chronic diseases/conditions.

The qualification will provide all economic sectors with a pool of well-qualified people whose competence will be internationally recognised and who will be able to perform specialised biokinetic health care services within any community setting.



The qualification is distinct from other qualifications within the health care profession as its main focus is the use of scientifically-based exercise prescription as a means of therapeutic intervention.

### HS11.6.2 Outcome

Competent Biokineticists are able to:

1. Demonstrate knowledge, competence, skills and attitudes related to the structure and function of the human body systems.
2. Demonstrate knowledge, competence, skills and attitudes related to the psychosocial aspects of health and human performance.
3. Demonstrate knowledge, competence, skills and attitudes related to biomechanics.
4. Demonstrate knowledge, competence, skills and attitudes related to exercise physiology and clinical exercise physiology for rehabilitation.
5. Demonstrate specialised knowledge, competence, skills and attitudes related to human motor behaviour.
6. Demonstrate adequate knowledge, competence, skills and attitudes related to exercise science.
7. Plan and implement effective and efficient therapeutic and recreation programmes.
8. Apply specialised knowledge, competence, skills and attitudes related to health promotion, health education and health related aspects of exercise and physical activity in individual, community and work context.
9. Apply relevant and appropriate knowledge, competence, skills and attitudes related to the prevention and rehabilitation of musco-skeletal injuries.
10. Apply relevant knowledge, competence, skills and attitudes in conducting scientific measurement and evaluation in biokinetic contexts.
11. Apply relevant knowledge, competence, skills and attitudes to the management of chronic diseases and disabilities.
12. Demonstrate competence of the research process and various methodologies as well as apply the relevant knowledge, skills and attitudes in conducting a research project on a biokinetics or related topic.
13. Manage a private or public biokinetics practice or health care facility.

### HS11.6.3 Rules of access

A Senior Certificate with university exemption, or an equivalent qualification as determined by a Status Committee. Life Sciences, although not compulsory, is highly recommended for entrance into the degree.

A National Senior Certificate - APS Score with minimum requirements as shown below:

Life Sciences, although not compulsory, is highly recommended for entrance into the degree.

A National Senior Certificate - APS Score with minimum requirements as shown below:  
(Exclude Life Orientation when calculating APS)

Minimum APS	Language of teaching and	Mathematics	Mathematical Literacy	Life Sciences	Physical Sciences
31 with Mathematics 32 with Mathematical Literacy	5	4	5	Not applicable	Not applicable

## Selection criteria

NB: All students accessing this qualification are required to register with the Health Professions Council of South Africa (HPCSA) for the duration of the study period. In addition to the above, numbers for this programme will be capped and thus the applicants will be selected based on their APS scores.

### HS11.6.4 Pass Requirements

To be promoted to the following year of study, students must have passed 100% of the modules in the previous year of study and to proceed with studies, students need to pass at least 60% of the modules in the previous year of study.

### HS11.6.5 Curriculum

<b>First year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Nutrition 1	NUT01A1	
Practice Administration 1	PAM01A1	
Psychology 1A	PSY1AA1	
<b>Semester two</b>		
Biomechanics 1	BIM01B1	
Psychology 1B	PSY1BB1	
<b>Year modules</b>		
Anatomy and Physiology 1	AAP01Y1	
Biokinetics 1	BIK01Y1	
<b>Second year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Year modules</b>		
Anatomy and Physiology 2	AAP01Y2	AAP01Y1
Biokinetics 2	BIK01Y2	BIK01Y1
Exercise Physiology	EXP01Y2	AAP01Y1
Perceptual Motor Behaviour	PMB01Y2	

<b>Third year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Exercise Science	EXS01A3	AAP01Y2
Research Methodology	RME01A3	
<b>Semester two</b>		
Clinical Exercise Science	CEX01B3	AAP01Y2
<b>Year modules</b>		
Biokinetics 3	BIK01Y3	BIK01Y2
Biokinetics Practice 1	BIO01Y3	BIK01Y2
<b>Fourth year</b>		
<b>Module name</b>	<b>Module code</b>	<b>Prerequisite code</b>
<b>Semester one</b>		
Practice Management and Entrepreneurship	PME01A1	
<b>Year modules</b>		
Biokinetics 4	BIK01Y4	BIK01Y3
Biokinetics Practice 2	BIO01Y4	BIO01Y3
Biokinetics Research: Mini Dissertation	BRD01Y4	

**HS11.7 BACHELOR OF COMMERCE HONOURS IN SPORT MANAGEMENT (H9S05Q)****Duration of programme****Full-time: Minimum 1 year and Maximum 2 years****NQF Level 8, 120 Credits****HS11.7.1 Purpose**

The student should develop applied competencies in the mastering, analysis, interpretation and application of management principles in the fitness and health, coaching, teaching and retailing sectors of the sport industry. The students should be able to reflect on their managerial decisions and applications to assess the effect thereof in the holistic context of sport management as practice.

**HS11.7.2 Outcome**

The student should be able to:

1. Resolve typical problems that exist in the management of sport environments.
2. Plan, implement and analyse research in a sport environment.
3. Apply different learning strategies in the study of sport and related competencies.
4. Apply strategic planning competencies.
5. Execute financial planning, control and analysis.
6. Manage the human resources of a sport environment/organization.
7. Plan, execute and evaluate a sport event(s).

**HS11.7.3 Rules of access**

A potential student should be in possession of a BCom (Sport Management) or any related qualification with a program specific minimum level of competency on the NQF Level 7 generating 360 credits (with an overall minimum average of 60% in the third year). Applications for admission are considered by a Departmental selection committee and a limited number is admitted every year. The limited number of students admitted is based on the Department's capacity to adequately expose the students to Work Integrated Learning (WIL) and student to supervisor ratios.

**HS11.7.4 Curriculum**

Module name	Module code
<b>Semester one</b>	
Facility and Event Management	HMS8X12
Sport Marketing	HMS8X14
Sport Sociology	HMS8X17
Strategic Management in Sport	HMS8X18
<b>Semester two</b>	
Human Resource Management in Sport	HMS8X13
Sport Finance	HMS8X15
<b>Year modules</b>	
Research Methodology	HMS8X03

**HS11.8 BACHELOR OF ARTS HONOURS IN SPORT SCIENCE (H9S03Q)****Duration of programme****Full-time: Minimum 1 year and Maximum 2 years****NQF Level 8, 120 Credits****HS11.8.1 Purpose**

The student should develop applied competence in the analysis, interpretation and application of sport science principles in the fitness and health, coaching and teaching sectors of the sport industry. The student should be able to take strategic decisions in the context of sport science and to assess any internal or external decision impacting on sport science. The student should further be able to reflect on his/her scientific decisions and applications to assess the effect thereof in the holistic context of sport science as practice.

**HS11.8.2 Outcome**

Students will develop the ability to internalize, reflect on and communicate related Sport Science principles in the fitness and health, coaching and teaching sectors of the Sport industry. The student should further be able to reflect on his/her scientific decisions and applications to assess the effect thereof in the holistic context of sport science as practice.

**HS11.8.3 Rules of access**

Access will be provided to a student who is in possession of a BCom (Sport Management) or sport related BA (Sport Science or Human Movement Studies) degree generating a minimum of 360 credits (with an overall minimum average of 60% in the third year). Applications for admission are considered by a Departmental selection committee.

**HS11.8.4 Curriculum**

Module name	Module code
<b>Semester one</b>	
Sport Vision	HMS8X19
<b>Semester two</b>	
Sport Psychology	HMS8X10
<b>Year modules</b>	
Exercise Physiology	HMS8X08
Research Methodology	HMS8X03
Exercise Science	HMS8X09
Sport Science Practice	HMS8X11

## **HS11.9 MASTER OF PHILOSOPHY IN BIOKINETICS (M9S03Q)**

### **Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits**

**Research dissertation 100%**

### **HS11.9.1 Purpose**

1. Perform independent scientific research with an original component.
2. Contribute to knowledge of and insight into Biokinetics as well as the specific discipline of research.
3. Display skills in related research methodologies and in proper formulation through a Master's dissertation.
4. Reflect upon decision-making, self-directedness and contributions to Biokinetics industry and practice.

### **HS11.9.2 Outcome**

The student will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Make conclusions, suggestions and recommendations based on the data collected that are logical and justifiable.
6. Produce one article for peer-reviewed publication.

### **HS11.9.3 Rules of access**

Access will be provided to the student who is in possession of an NQF Level 8 qualification in Biokinetics (with an average pass mark of at least 65%) according to the Faculty Rules and Regulations.

#### **Selection criteria**

Selection is based on academic merit, and an interview (if required).

### **HS11.9.4 Curriculum**

A dissertation on an approved topic. Refer to the Academic Regulations booklet for applicable regulations on masters' qualifications.

<b>Module name</b>	<b>Module codes</b>
<b>Semester one</b>	
Dissertation: Biokinetics	HMS9X03
<b>Semester two</b>	
Dissertation: Biokinetics	HMS9X04

### **HS11.9.5 Closing date for applications**

The closing date for applications is 31 October each year.

### **HS11.10 MASTER OF COMMERCE / MASTER OF PHILOSOPHY IN SPORT MANAGEMENT (M9S02Q) / (M9S04Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits**

**Research dissertation 100%**

#### **HS11.10.1 Purpose**

Through the masters' dissertation a qualifying student would show evidence of independent and original scientific work. The dissertation would constitute a decided contribution to knowledge of and insight into the subject discipline as well as the field of research. Qualifying students would also display competence in the application of related research methodology, and the proper written and/or oral communication of the research process and findings. The student should be able to reflect on his/her research decisions and applications to assess the effect thereof in the holistic context of the sport industry.

#### **HS11.10.2 Outcome**

The student will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Make conclusions, suggestions and recommendations based on the data collected that are logical and justifiable.
6. Produce one article for peer-reviewed publication.
7. Present the findings at a national forum.

#### **HS11.10.3 Rules of access**

Access will be provided to the student who is in possession of an Honours qualification in Sport Management (with an average pass mark of at least 65%). In the case of an interdisciplinary or interdisciplinary master's programmes (MPhil), additional admission requirements may be set by the two or more relevant interdisciplinary fields/departments/faculties and contained in the relevant Faculty Rules and Regulations.

#### HS11.10.4 Curriculum

A dissertation on an approved topic. Refer to the Academic Regulations booklet for applicable regulations on masters' qualifications.

Module name	Module code
<b>Semester one</b>	
Dissertation: Sport Management (MCom)	HMS9X01
Dissertation: Sport Management (MPhil)	HMS9X05
<b>Semester two</b>	
Dissertation: Sport Management (MCom)	HMS9X02
Dissertation: Sport Management (MPhil)	HMS9X06

#### HS11.10.5 Closing date for applications

The closing date for applications is 31 October each year.

#### HS11.11 **MASTER OF PHILOSOPHY IN SPORT SCIENCE (M9S06Q)**

**Duration of programme**

**Full-time: Minimum 1 year and Maximum 2 years**

**Part-time: Minimum 1 year and Maximum 3 years**

**NQF Level 9, 180 Credits**

**Research dissertation 100%**

##### HS11.11.1 Purpose

Through the master's dissertation in which the qualification finally culminates, a qualifying student would show evidence of independent and original scientific work. The dissertation would constitute a decided contribution to knowledge of and insight into the subject discipline as well as the field of research. Qualifying students would also display competence in the application of related research methodology, and the proper written and/or oral communication of the research process and findings. The student should be able to reflect on his/her research decisions and applications to assess the effect thereof in the holistic context of the sport science industry.

##### HS11.11.2 Outcome

The student will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Make conclusions, suggestions and recommendations based on the data collected that are logical and justifiable.
6. Produce one article for peer-reviewed publication.
7. Present the findings at a national forum.



### HS11.11.3 Rules of access

Access will be provided to the student who is in possession of an honours qualification in Sport Science (with an average pass mark of at least 65%) according to the Faculty Rules and Regulations.

### HS11.11.4 Curriculum

A dissertation on an approved topic. Refer to the Academic Regulations booklet for applicable regulations on masters' qualifications.

Module name	Module code
<b>Semester one</b>	
Dissertation: Sport Science	HMS9X07
<b>Semester two</b>	
Dissertation: Sport Science	HMS9X08

### HS11.11.5 Closing date for applications

The closing date for applications is 31 October each year.

## HS11.12 **DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: BIOKINETICS (P9H12Q)**

**Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF Level 10, 360 Credits**

**Research thesis 100%**

### HS11.12.1 Purpose

The primary purpose of this qualification is to provide qualifying students with the ability to:

1. Perform independent original and creative scientific research.
2. Contribute significant knowledge to and insight into Biokinetics as well as the specific discipline of research.
3. Display skills in related research methodologies and in proper formulation through a doctoral thesis.
4. Reflect upon decision-making, self-directedness and contributions to the Biokinetics profession.

### HS11.12.2 Outcome

The student will be able to:

1. Identify and/or create an original research problem.
2. Design, construct and execute research at this level.
3. Collect appropriate data in a precise and logical manner and evaluate and judge the information obtained.
4. Acquire learning abilities in the research context including the assessment of scientific literature, construction of a research project, execution of the project, analysis of the data and producing sound scientific arguments.
5. Make relevant conclusions based on the data collected that are logical and justified.

6. Produce two articles for peer-reviewed publication.

### **HS11.12.3 Rules of access**

Access will be provided to the student who is in possession of a masters' qualification in Biokinetics (with an average pass mark of at least 65%) with a programme specific minimum level of competency on NQF Level 9, generating a minimum of 180 credits.

#### **Selection criteria**

Selection is based on academic merit, and an interview (if required).

### **HS11.12.4 Pass requirements**

Refer to the Academic Regulations of the University of Johannesburg.

### **HS11.12.5 Curriculum**

A research thesis. The research component is 100%.

<b>Module name</b>	<b>Module code</b>
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Biokinetics)	RPB10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Biokinetics)	RPB10X2

### **HS11.12.6 Closing date for applications:**

The closing date for applications is 31 October each year.

## **HS11.13 DOCTOR OF PHILOSOPHY IN HEALTH SCIENCES: SPORT SCIENCE (P9H11Q)**

#### **Duration of programme**

**Full-time: Minimum 2 years and Maximum 4 years**

**Part-time: Minimum 2 years and Maximum 5 years**

**NQF Level 10, 360 Credits**

**Research thesis 100%**

### **HS11.13.1 Purpose**

Through the doctoral thesis, in which the qualification finally culminates, a qualifying student would show evidence of independent and original scientific work. The thesis would constitute a decided contribution to knowledge of and insight into the subject discipline as well as the field of research. Qualifying students would display applied competence in research methodology, and the proper written and/or oral communication in the research process and findings. The student should be able to reflect on his/her research decisions and applications to assess the effect thereof in the holistic context of research in the sport industry.

### HS11.13.2 Outcome

The student will be able to:

1. Identify, formulate, prepare and solve research problems.
2. Execute the research project at the appropriate level.
3. Collect, organize, check, evaluate and write a proper literature review organizing the appropriate information in an understandable and logic manner.
4. Acquire learning abilities in the research context including the assessment of scientific literature, execution of research methodologies including the gathering of data and evaluating the information obtained.
5. Make conclusions, suggestions and recommendations based on the data collected that are logical and justifiable.
6. Produce two articles for peer-reviewed publication.

### HS11.14.3 Rules of access

Access will be provided to the student who is in possession of a masters' qualification in Sport Science (with an average pass mark of at least 65%) with a programme specific minimum level of competency on NQF Level 9, generating a minimum of 180 credits.

#### Selection criteria

Selection is based on academic merit, and an interview (if required).

### HS11.14.4 Pass requirements

Refer to the Academic Regulations of the University of Johannesburg.

### HS11.14.5 Curriculum

A research thesis. The research component is 100%.

Module name	Module code
<b>Semester one</b>	
Research Project and Thesis: Health Sciences (Sport Science)	RSS10X1
<b>Semester two</b>	
Research Project and Thesis: Health Sciences (Sport Science)	RSS10X2

### HS11.14.6 Closing date for applications

The closing date for applications is 31 October each year.

**HS12.0 MODULES PRESENTED BY THE FACULTY****HS12.1 DEPARTMENT OF BIOMEDICAL SCIENCES****BACHELOR OF HEALTH SCIENCES IN MEDICAL LABORATORY SCIENCES (B9B01Q)**

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcomes
Cell Biology 1	CLBHBB1	50%	50%	6	12	The purpose of this module is to introduce the student to the basic structures and functions of cells, and biological molecules that make up living organisms. This course aims to familiarize the student with the basic structure and function of the different biochemical molecules and how the different levels of structure influence the function of the compounds. The metabolic pathways involved in the synthesis and breakdown of the different compounds will also be studied. The module will also give an outline of molecular biology, biochemistry of cancer, and applied biochemistry.	On successful completion of this module, students will be able to understand and describe: The biochemical perspective of medicine, cells, and the detailed structure, function, and properties of biomolecules. Importance of enzymes and enzyme kinetics in the biological system. Detailed major and minor metabolic pathways, their functions and regulation. Students will also have an in-depth understanding of the Etiology of cancer, the carcinogenesis process and the difference between normal and cancer cells, nucleotide's structure and chemistry, The structure of nucleic acids, replication, transcription and translation.
Chemistry 1A	CEMH1A 1	50%	50%	5	12	The purpose of this module is to develop the students understanding of chemical principles and techniques within general, organic chemistry and inorganic chemistry which will serve as a fundamental basis for the student's	On successful completion of this module, students will be able to understand, apply, and perform: <ul style="list-style-type: none"> <li>• Basic chemistry</li> <li>• Atoms and molecules</li> <li>• Systems of classification</li> <li>• Chemical calculations</li> </ul>

						<p>further development in the biological sciences. To develop the applied practical and laboratory skills of the students required in the Biomedical Technology field.</p>	<ul style="list-style-type: none"> <li>Chemistry of elements and water</li> </ul> <p>Students will also be introduced to:</p> <ul style="list-style-type: none"> <li>Alkanes &amp; Alkenes</li> <li>Aromatic compounds</li> <li>Alkanols and phenols</li> <li>Alkyl and arylhalides</li> <li>Alkanoates and Alkynes</li> <li>Alkanals and alkanones</li> <li>Alkanoic acids and Amines</li> </ul>
Clinical Chemistry 2A	CLCHBA 2	50%	50%	6	12	<p>The purpose of this module is to introduce the student to the basic concepts of instrumentation and quality assurance used in the Clinical Chemistry laboratory. This module will further introduce the students to case study-based learning and prepare the student to apply their theoretical knowledge of normal and abnormal physiology to the recognition and diagnoses of diseases affecting the systems that will be covered. This module is not only relevant to the student's present academic programme but is also relevant to his/her future personal and professional life in Medical Technology.</p>	<p>On successful completion of this module, the student should be able to:</p> <p>Describe all test principles and methodologies used in Chemical Pathology. Make detailed sketches or line drawing of each of the above instruments, state the principles that govern the functioning of these instruments. Must be able to discuss the advantages and disadvantages of each technique and instruments used in a Clinical Chemistry laboratory. Calculation used in everyday laboratory preparations and procedures involving specific technique. Understand the process and purpose of Quality control and Quality assurance. Apply the criteria for selecting and evaluating new methodology. Use the normal and abnormal physiology of the human water and electrolyte balance to diagnose diseases affecting this system. Use the information of the normal and abnormal physiology and maintenance of the acid base balance to diagnose and identify diseases that affects the acid base. Apply normal and abnormal</p>

							<p>physiology of the kidney and the hormonal control of its function to diagnose the diseases that affect the kidney. Understand the importance of proteins and their physiological functions and clinical utility of protein measurement</p>
Clinical Chemistry 2B	CLCHBB 2	50%	50%	6	12	<p>This module will further introduce the students to normal and abnormal physiology to the recognition and diagnoses of diseases affecting the systems that will be covered. This module is not only relevant to the student's present academic programme, but also involves the integration of other core modules relevant to future personal and professional life in Medical Laboratory Sciences.</p>	<p>On successful completion of this module, the student should be able to:</p> <p>Use their knowledge of enzyme tissue distribution to make differential diagnoses of the diseases.</p> <p>Use their knowledge of liver physiology, enzymology, and immunology to make a differential diagnoses of liver diseases</p> <p>Discuss the principal and applications of Immunochemical techniques used in chemical pathology (Self-study, repeat section).</p> <p>Apply the base knowledge of hormones and their target organs in the diagnoses of hormonal based diseases</p> <p>Define of the main terminology used in pharmacology, as well as the target molecules for pharmaceuticals and their actions.</p> <p>Discuss the routes of administration, absorption, distribution, and excretion of pharmaceuticals.</p> <p>Define the symptoms and physiological changes caused by drugs of abuse and discuss the methods for testing.</p>
Clinical Chemistry 3	CLCHBA 3	50%	50%	7	12	<p>The purpose of this module is to introduce the student to the functions, diseases associated with carbohydrates, lipids,</p>	<p>On successful completion of this module, the student should be able to:</p> <p>Assess a patient's laboratory results and</p>

						<p>minerals and body fluids and the laboratory analysis thereof. laboratory. This module will further introduce the students to case study-based learning and prepare the student to apply their theoretical knowledge of normal and abnormal physiology to the recognition and diagnoses of diseases affecting the systems that will be covered.</p>	<p>follow-up test, as well as theoretically administer some of the follow-up tests safely.</p> <p>Differentially diagnose the different types of lipid and lipoprotein disorders, and discuss the impact on the blood lipid levels</p> <p>Integrate their knowledge of physiology and macro and micro minerals to diagnose diseases that involves their balance in the body.</p> <p>Analyse the results of different body fluids to make patient management and diagnostic decisions</p> <p>Discuss the mechanism of action, indications, undesirable effects, pharmacokinetics, contraindications, and drug interactions of cardiovascular drugs.</p> <p>Decide for which disease the specific the lipid lowering agents, antibiotics/drugs of abuse and anticonvulsants will be indicated for by using their different mechanism of action of these pharmaceuticals</p>
Clinical Chemistry 4	CLCHBY 4	50%	50%	8	120	The purpose of this module is to provide students with the theoretical and practical knowledge to integrate information learned and apply it in diagnostic clinical chemistry.	On successful completion of this module, students will be able to apply and integrate information acquired from 2nd and 3rd year clinical chemistry modules to make final diagnosis in the science of clinical chemistry
Clinical Pathology 4	CNPHBY 4	50%	50%	8	120	The purpose of this module is to provide students with the theoretical and practical knowledge to be able to apply an integrated approach in diagnostic clinical pathology.	On successful completion of this module, students will be able to apply and integrate information acquired in medical microbiology, Clinical chemistry and haematology to make final diagnosis in the science of clinical pathology

Communication for Medical Laboratory Sciences 1A	CMLSBA 1	100%	0%	5	4	<p>This module is meant for:</p> <ul style="list-style-type: none"> <li>- the development of effective writing and analytical skills. Understanding the communication process,</li> <li>- paragraph/ essay writing</li> <li>- Effective writing for various audiences, business, and thesis writing.</li> <li>- Effective verbal communication and non-verbal communication skills</li> <li>- Oral presentation, creation of a presentation, delivering and choice of effective presentation tools. Conflict management and resolution.</li> </ul>	<p>On successful completion of this module, students will be able to:</p> <p>Identify errors of style, punctuation,</p> <p>language content and layout.</p> <p>Evaluate, justify, and interpret the underlying meaning of a given text.</p> <p>Identify the components of communication.</p> <p>Correctly write structured paragraphs.</p> <p>Apply effective referencing techniques as suggested in academia.</p> <p>Skilfully create references for a book, journal, internet source and newspaper articles.</p> <p>Identify various language problems.</p> <p>Evaluate individual non-verbal communication.</p> <p>Deliver effective oral presentation</p>
Computer Skills	CSL01A1	50%	50%	5	4	<p>The purpose of this module is to introduce the students to basic IT (Information Technology) terms, Microsoft Word and Microsoft PowerPoint skills, including the basic components of a computer.</p>	<p>On successful completion of this module, students will be able to:</p> <p>Use the Word Processing application to solve business problems</p> <p>Use presentation software</p> <p>Use Ms Excel to create spreadsheets</p> <p>Use Ms Access to create databases</p>
Cytogenetics 2	CTGHBB 2	50%	50%	6	12	<p>The purpose of this module is to introduce the student to the basic concepts of understanding normal and abnormal chromosomes and will also include topics on hereditary and variation such as Mendelian genetics, non —</p>	<p>On successful completion of this module, students will be able to recognize, describe and discuss in detail the different aspects of chromosomal structure, number, and behaviour, and their effects at the organismal, population and species levels.</p>



						Mendelian genetics and molecular genetics.	
Cytogenetics 4	CYTGBY 4	50%	50%	8	120	The purpose of this module is to provide students with the theoretical and practical knowledge to integrate information learned and apply it in diagnostic cytogenetics cases. and molecular genetics.	On successful completion of this module, students will be able to apply and integrate information acquired to make final diagnosis in the science of cytogenetics.
Cytopathology 2	CTPHBB 2	50%	50%	6	12	<p>The purpose of this module is to provide students with the theoretical and practical knowledge to:</p> <p>Differentiate between changes seen in epithelial cells.</p> <p>Recognize and identify different parts of FGT.</p> <p>Explain the role of hormonal assessment.</p> <p>Outline histologic and cytologic cellular components of normal FGT.</p> <p>Comprehend cells and cytological criteria for diagnosing infectious agents.</p> <p>Outline benign changes in the FGT.</p> <p>Analyse histological and cytological changes due to precancerous lesions and malignancies of FGT.</p> <p>Demonstrate specialized techniques used histologically and cytologically in aiding with diagnosis of the FGT</p>	<p>On successful completion of this module, students will be able to:</p> <p>Discuss different biological behaviour of epithelial cells.</p> <p>Explain and apply different methods of obtaining specimen from FGT.</p> <p>Correlate clinical history FGT to the hormonal pattern.</p> <p>Compare and contrast between normal histologic and cytologic epithelial cells found in the FGT.</p> <p>Identify and recognize cellular changes associated with different agents of infections.</p> <p>Explain and apply microscopic changes that are due to benign changes-FGT.</p> <p>Detailed microscopic analysis of precancerous lesions and malignancies of FGT.</p> <p>Application of specialized techniques in diagnosing histological and cytological cases of FGT.</p>
Cytopathology 3	CTPHBA 3	50%	50%	7	12	<p>The purpose of this module is to provide students with the theoretical and practical knowledge to:</p> <p>Examine normal cellular content, benign changes and malignancies of the</p>	<p>On successful completion of this module, students will be able to:</p> <p>Detailed discuss the normal cellular content, benign changes and malignancies of the respiratory tract and oral cavity.</p>

						<p>respiratory tract and oral cavity</p> <p>Examine agents of infection of the respiratory tract and oral cavity.</p> <p>Analyse normal cellular content, benign changes, and malignancies of the urinary tract.</p> <p>Recognize and construct normal cellular content, benign and malignant pathological aetiologies of the serous cavities.</p> <p>Outline FNA principle in cytology.</p> <p>Explain normal cellular content and pathology of the CNS.</p> <p>Explain normal cellular content and pathology of the gastrointestinal tract.</p>	<p>Outline different agents of infection of the respiratory tract and oral cavity.</p> <p>Compare and contrast normal cellular content, benign changes, and malignancies of the urinary tract.</p> <p>Differentiate cytomorphologically between benign and malignant pathological aetiologies of the serous cavities.</p> <p>Apply the principle of FNA-Breast and Thyroid gland.</p> <p>Discuss normal cellular content and pathology of the CNS.</p> <p>Assess normal cellular content and pathology of the gastrointestinal tract.</p>
Cytopathology 4	CTPHBY 4	50%	50%	8	120	The purpose of this module is to provide students with the theoretical and practical knowledge to integrate information learned and apply it in diagnostic cytopathological cases.	On successful completion of this module, students will be able to apply and integrate information acquired to make final diagnosis in the science of cytopathology.
Forensic Sciences 4	FRSHBY 4	50%	50%	8	120	The purpose of this module is to provide students with experience and a broad overview of evidence categories and crime types commonly encountered within the criminal justice system.	On successfully completing the module students will have knowledge and understanding of core and foundation scientific physical, biological, and chemical concepts, terminology, theory, units, conventions, and laboratory methods in relation to forensic science.
Haematology 2A	HAEHBA 2	50%	50%	6	12	The purpose of this module is to provide students with the theoretical and practical knowledge to identify normal haemopoiesis, recognise and interpret physiological changes in red cell number and morphology and finally to	<p>On successful completion of this module, students will be able to:</p> <p>Understand, describe, interpret, and perform various haematology tests</p> <p>Understand, describe, and identify the processes involved in erythropoiesis</p>

						diagnose and understand the pathophysiology of various red cell diseases	Describe (identify the definition, incidence, pathophysiology, clinical features, aetiology, laboratory findings and treatment) various red cell disorders.
Haematology 2B	HAEHBB 2	50%	50%	6	12	The purpose of this module is to provide students with the theoretical and practical knowledge to identify normal leucopoiesis, recognise and interpret physiological changes in white cell number and morphology and finally to diagnose and understand the pathophysiology of various white cell diseases.	On successful completion of this module, students will be able to: Understand, describe, interpret and perform various haematology tests  Understand, describe and identify the processes involved in leucopoiesis  Describe (identify the definition, incidence, pathophysiology, clinical features, aetiology, laboratory findings and treatment) various white cell disorders.
Haematology 3	HAEHBA 3	50%	50%	7	12	The purpose of this module is to provide students with the theoretical and practical knowledge to identify normal thrombopoiesis, recognise and interpret physiological changes and morphology and finally to diagnose and understand the pathophysiology of various haemostatic diseases.	On successful completion of this module, students will be able to: Understand, describe, interpret and perform various coagulation tests  Understand, describe, and identify the processes involved in thrombopoiesis  Describe (identify the definition, incidence, pathophysiology, clinical features, aetiology, laboratory findings and treatment) various haemostatic disorders.
Haematology 4	HAEHBY 4	50%	50%	8	120	The purpose of this module is to diagnose and understand the pathophysiology of various haematological diseases, including anaemias, haemostatic disorders and haematological malignancies.	On successful completion of this module, students will be able to: Describe (identify the definition, incidence, pathophysiology, clinical features, aetiology, laboratory findings and treatment) various haematological disorders by integrating the information learned in haematology 2-3.

							Understand, describe, interpret, and perform various haematology tests
Human Anatomy, Physiology and Disease 1	HAPDBY 1	100%	0%	6	30	The purpose of this module is to provide foundational knowledge for pathology and clinically related subjects. It will enable students to gain understanding of the structure of the human body and the relationship for the function of different organ systems. This module prepares the student for all the specialist subjects from second to final years.	<p>On successful completion of this module, students will be able to:</p> <p><b>Anatomy</b> Describe and apply all anatomical terminology. Describe the types of tissues in the body, classification and functions of epithelial tissue. Compare the structures and functions of the various types of connective tissue. Describe the muscle and neural tissue of the body, locate the major endocrine organs, describe their structure and the effect of the hormones they produce Describe the anatomy of the female reproductive system, mammary glands Discuss the organisation and structure of the nervous system, outline the structure of the central nervous system, describe the structure of the peripheral nervous system Describe the structure of the eye, ear and tongue, the anatomy of the heart, discuss the structure of blood vessels. Describe the anatomy of the respiratory system, the structure of the gastrointestinal tract, oral cavity, pharynx, stomach, and oesophagus, small intestine and associated glandular organs Understand fluid and electrolyte balance and their disorders Define the basic principles, terms and concepts of Physiology, different levels of organisation in living organisms.</p>

							<p>Identify the organ systems of the body, outline the characteristics of living organisms and discuss the survival needs of living organisms and the importance of homeostasis in living organisms.</p> <p>Understand infections and classify the different types of infections and the Host responses to infections</p> <p>Discuss the disease mechanisms involved in nutritional diseases</p>
Histopathology 2	HTPHBA 2	50%	50%	6	12	<p>The purpose of this module is to introduce the student to the basic concepts and branches of histopathology. This module will prepare the student for laboratory methods, procedures, and more complex material regarding histology techniques and content.</p>	<p>On successful completion of this module, students will be able to:</p> <ul style="list-style-type: none"> <li>use medical and technical terms, route specimens to specific laboratories and know what methods are used for different specimens in the Histology, Cytology and Cytogenetics laboratories</li> <li>cope with various levels of administration in the laboratory, practice ethical conduct and be familiar with laboratory safety procedures</li> <li>operate all relevant equipment/apparatus, fix, decalcify, process, infiltrate and embed tissue for Histology diagnosis together with quality control procedures</li> <li>master all necessary microtomy, staining techniques, fault finding, tissue identification and quality control in the Histology laboratory</li> <li>produce artefact free slides for the identification of pigments, theoretically know how to run and prepare mounts for an Anatomy and Pathology Museum</li> </ul>
Histopathology 4	HTPHBY 4	50%	50%	8	120	<p>The purpose of this module is to provide students with the</p>	<p>On successful completion of this module, students will be able to:</p>

						theoretical and practical knowledge to integrate information learned and apply it in diagnostic histopathological cases.	Describe (identify the definition, incidence, pathophysiology, clinical features, aetiology, laboratory findings and treatment) various histologically diagnosed disorders by integrating the information learned in histopathology 2.  Understand, describe, interpret, and perform various histopathology tests
Immunohaematology 2	IMHHBA2	50%	50%	6	12	The purpose of this module is to introduce students the to main clinical aspects of transfusion medicine	On successful completion of this module, students will understand: The transfusion processes.  The membrane of the red blood cell. Erythrocyte antigens. The group AB0.  The Rh and other blood groups. Importance of transfusion of blood groups.  The red cell alloimmunization and transfusion compatibility testing.  Autoimmune hemolytic disease.  Blood components: preparation, storage, quality control.  The immunohaematological and clinical criteria for the selection and assignment of blood components  The transfusion's legislation. Relevance to the lab technician  The good use of blood: transfusion safety and appropriateness. The main transfusion reactions  Hemolytic disease of the newborn
Immunohaematology 4	IMHHBY4	50%	50%	8	120	The purpose of this module is to provide students with the theoretical and practical knowledge to integrate	On successful completion of this module, students will know the main clinical aspects of transfusion

						information learned and apply it in diagnostic	medicine and practices of good use of blood.
Immunology 1	IMMHBB1	50%	50%	6	12	This module will introduce the students to normal and abnormal physiology to the recognition and diagnoses of diseases affecting the systems that will be covered.	<p>After completion of this module students will be able to:</p> <p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation, or community by means of project presentations</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different anatomical/ Physiological/Biological concepts</p>
Immunology 4	IMMHBY4	50%	50%	8	120	The purpose of this module is to provide students with the theoretical and practical knowledge to integrate information learned and apply it in diagnostic.	<p>On successful completion of this module, students will be able to:</p> <p>Describe (identify the definition, incidence, pathophysiology, clinical features, aetiology, laboratory findings and treatment) various immunologically diagnosed disorders by integrating the information learned.</p>

							Understand, describe, interpret, and perform various immunological tests
Integrative Medical Laboratory Sciences IIIA (Clinical Practice Theory)	IMLHBA3	50%	50%	7	9	The purpose of this module is to develop the proficiency to arrive at disease diagnosis by integrating information acquired from the different laboratory test results in all disciplines (core modules) in conjunction with a wholesome understanding of the disease from aetiology (cause), pathophysiology (mechanisms), and its manifestations (signs and symptom).	<p>At the end of this module, you need to have achieved the following:</p> <p>Identify diseases by analysing the signs, symptoms</p> <p>Identify diseases by analysing laboratory tests and be able to demonstrate basic understanding of disease processes and how disease features allow for particular diagnostic methods to be used</p> <p>Be able to integrate laboratory findings for the diagnosis of disease</p> <p>Be able to work effectively with others as a member of a team, group, organisation or community by means of topic discussions, content preparation and presentations.</p> <p>Collect, analyse, organise and critically evaluate information in case studies, literature reviews and technology-based learning platforms to derive conclusions about a given topic or problem.</p>
Integrative Medical Laboratory Sciences IIIB (Clinical Practice)	IMLHBB3	50%	50%	7	60	<p>The course provides an opportunity for the student to gain exposure to the following:</p> <p>developing a broad insight into mainstream medical technology</p> <p>gaining “hands-on” experience in the practical operation of a working medical laboratory</p> <p>acquiring a basic level of skill in relevant laboratory techniques</p> <p>experiencing the working environment of the</p>	<p>On successful completion of this module, students will be able to:</p> <p>Apply laboratory and work ethics, medical law and human rights</p> <p>Apply safety protocols applicable to medical pathology laboratories.</p> <p>Apply quality control procedures relevant to testing processes and laboratory standard operating procedures (sops).</p> <p>Maintain laboratory records and documentation in</p>



						<p>practicing medical technologist</p> <p>experiencing differences in various disciplines within the medical laboratory</p> <p>Experiencing relationships with the employer, other members of the health-care team and colleagues within a medical laboratory</p> <p>Fulfilling part of the requirement of the relevant qualification.</p> <p>This exposure will allow the student to make an informed choice regarding their preferred discipline and, ultimately, their career path.</p>	<p>accordance with site specific sops.</p> <p>Discuss the workflow and compile an organogram of a laboratory.</p> <p>Maintain professional integrity and display dependability.</p> <p>Display co-operation and effective communication.</p> <p>Perform calculations relevant to reagent preparation and generation of patient results.</p> <p>Perform discipline specific outcomes as defined.</p>
Introduction to Laboratory Sciences 1A	IMLSBA1	100%	0%	5	8	<p>The purpose of this module is to introduce the student to the profession and the various specializations in the diagnostic laboratory. This module will further introduce the students to medical law and ethic. These foundation courses pave the way from simple concepts to complex application of knowledge in case studies</p>	<p>The outcome is the achievement of the purpose of the qualification as stipulated in the curricula. This qualification also leads to registration with the Health Professions Council of South Africa (HPCSA) as Medical Laboratory Scientists.</p> <p>Introduction to Medical Laboratory Science, IMLSBA1 is a fundamental module for application of basic knowledge in Medical Laboratory practice. This module is the foundation for subsequent modules</p>
Introduction to laboratory Sciences 1B	IMLSBB1	100%	0%	5	18	<p>This module will introduce students to medical laboratory science equipment, the requisite skills that are required for university level use and maintenance of equipment. This module will further introduce the students to current 4IR developments that are being implemented in MLS. This module is not only relevant to the</p>	<p>On successful completion of this module, students will have an:</p> <p>Understanding of common laboratory assays and functions.</p> <p>Understanding common laboratory assays collection and function.</p> <p>Understanding instrument calibration and knowing how to set acceptable limits for various applications.</p>

						<p>student's present academic programme but is also relevant to his/her future personal and professional life in Medical Science.</p>	<p>Understanding the principles of Spectrophotometry, Cytometry, microscopy, PCR thermocyclers and Automated laboratories.</p> <p>Guidelines for information management in a laboratory.</p> <p>Describing the principle of PCR and discussing PCR applications.</p> <p>Defining 4IR and its role in Modern Laboratory</p>
Laboratory Management 4	LBMHBA 4	50%	50%	8	5	<p>The purpose of this module is to introduce the student to the basic concepts of laboratory management and aims to introduce the topic of entrepreneurial laboratory management. It mainly focuses on the start of a new business, recruitment of new staff and the general management of staff. This module is not only relevant to the student's present academic programme but is also relevant to his/her future personal and professional life in Medical Technology.</p>	<p>On successful completion of this module, the student should be able to:</p> <p>Identify the different clients, socioeconomic level of population and competitors.</p> <p>Identify and comply with the legalities involved to start a medical technology laboratory.</p> <p>Compile a product mix by looking at the list of possible clients and their specific needs</p> <p>Compile a budget for the set-up cost, bridging finance for the first 3 months as well as creating an income statement.</p> <p>Devise a marketing strategy and focussed direction to optimally utilise the strengths of the laboratory and the clients available.</p> <p>Draw up a SWOT analysis for the proposed business as well as the different business opportunities identified</p> <p>Recruit, select and manage staff</p>
Medical Microbiology 2A	MDMHBA2	50%	50%	6	12	<p>The purpose of this module is to introduce the student to the basic concepts and branches of Microbiology.</p>	<p>On successful completion of this module, the student should be able to identify the basic requirements for the laboratory isolation of micro-organisms, understand the genetic structures and the</p>

							processes necessary to control the growth and spread of micro-organisms during infections and in the environment.
Medical Microbiology 2B	MDMHBB2	50%	50%	6	12	The purpose of this module is to introduce to students all the types of tasks they might be expected to perform in the routine medical microbiology laboratory. This will include the collection and handling of routine specimens, common isolates and how to identify them, their pathogenesis, and routine serological techniques.	On successful completion of this module, the student should be able to differentiate micro-organisms from various human samples, food, water and milk samples according to the microscopic, cultures, biochemical and where applicable serological and molecular reactions.
Medical Microbiology 3 (Virology, Mycology, Parasitology)	MDMHBA3	50%	50%	7	12	The purpose of this module is to introduce the student to the identification of diseases associated with mycology infections, parasitology, and viruses.	On successful completion of this module, the student should be able to identify common fungal isolates based on the microscopic and colonial morphology, parasitic components like larvae, cysts and worms according to their life cycle and basic virology in terms of classification, replication processes, culture, epidemiology and control alongside the serological methods to detect viral infections.
Medical Microbiology 4	MDMHBY4	50%	50%	8	120	The purpose of the module is to integrate the theoretical knowledge covered in the 3 years of study into the laboratory setting diagnosing actual patient samples and micro-organisms	On successful completion of this module, the student should be able to successfully apply all the microscopic, morphological, biochemical, serological, and molecular knowledge to provide a correct diagnosis
Pharmacology 4	PHMHBY4	50%	50%	8	120	The purpose of the module is to focus students on the mechanisms by which chemical entities (drugs, hormones, transmitters, toxins) affect the human body. It is a vital discipline in Biomedical Sciences and of particular relevance to understanding how to treat many pathologies manifest in a patient population.	On successful completion of this module, the student should be able to: Describe the role of pharmacology in the study of disease.  Demonstrate an understanding of the action of drugs and factors affecting the interactions of drugs with the human body.  Outline the process of drug discovery.

							<p>Demonstrate an understanding of some experimental approaches in pharmacological science.</p> <p>Describe the contribution that pharmacology makes to other biomedical sciences.</p> <p>Analyse and interpret data from basic pharmacological experiments</p>
Physics 1B	PHYH1B1	50%	50%	5	12	<p>The purpose of this module is to provide a factual knowledge of definitions, methods and principles in Physics, and a broad background knowledge of basic Physics to aid in the understanding and interpretation of future scientific and technological development and to acquire the following life skills such as identifying and solving problems, working in groups and communicating effectively as is needed by the Biomedical Technologist.</p> <p>To develop the applied practical and laboratory skills of the students required in the Biomedical Technology field.</p>	<p>On successful completion of this module, the student should be able to:</p> <p>Show understanding of, describe and demonstrate:</p> <p>Energy, Motion applications in Biomedical Sciences, etc.</p> <p>Mechanics applications in biological science</p> <p>Total mechanical energy</p> <p>Fluid mechanics and sound applications</p> <p>Applications of Electrical potential and circuits</p> <p>Applications of optics and heat</p> <p>Radiation exposure (descriptive)</p>
Research Methods 3	RSMHBB3	50%	50%	7	8	<p>The module aims to familiarise the student with the tools to develop an understanding of transitional research which encompasses basic science in the laboratory, clinical investigations, and population research. A sound study plan with a research question or hypothesis is ideal. It is important to understand the research need, how and when to design research. However, there is no single approach to planning a research study. It is,</p>	<p>On successful completion of this module, the student should be able to do composition, problem identification, designing a research topic, ethical guidelines, source referencing, plagiarism policies, data collection and analyses, significance of statistics in research and framing a research proposal</p>

						therefore, important for the student to have the tools to begin an enquiry that will lead to important advances in knowledge, albeit that they may be small or major scientific breakthroughs. This module aims to accomplish all these purposes for a successful research outcome.	
Research Project IV (Mini Dissertation in the field of Specialisation)	RSPHBY 4	50%	50%	8	12	The purpose of this module is to provide the necessary support to students to do a research project.	On successful completion of this module, the student should be able to write up and submit a scientific research report in a form of a dissertation.
Statistical Methods 1A	SMT01A1	50%	50%	5	8	The purpose of this module is to provide the necessary support to students to deal with calculations and the handling of data encountered in the curricula and subsequent research topics.	On successful completion of this module, students will be able to do: Mathematical calculations Graphs and equations Basic description of statistical analysis Correlation analysis Calculation of the correlation coefficient Chemical calculations

**BACHELOR OF HEALTH SCIENCES IN CHIROPRACTIC (B9C01Q)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
Anatomy 2	ANTCHY 2	100%	0%	7	30	This module introduces advanced knowledge of human anatomy	<p>On completion of this learning event, students should be able to:</p> <ul style="list-style-type: none"> <li>• Understand the gross anatomy of the regions of the human body comprising the following units: surface anatomy and landmarks, skeletal anatomy, muscular and other soft tissue anatomy, cardiovascular anatomy, neural anatomy</li> <li>• Describe the embryology of the human body comprising the following units: Early embryology and systemic/regional embryology (Head and Neck, Cardiovascular system, Gastrointestinal System, Urinary System, Reproductive System)</li> <li>• Explain Systemic Histology of the human body comprising the following units: Basic tissues, Respiratory system, Cardiovascular system, Gastrointestinal System, Urinary System, Reproductive</li> </ul>

							System, Endocrine System, Lymphatic System
Anatomy and Physiology 1	ANPCHY 1	100%	0%	5	35	This modules introduces the student to the concepts of anatomy and physiology required for articulation into 2nd year modules in anatomy and physiology	On completion, the student will be able to; <ul style="list-style-type: none"> <li>Understand the concepts and systems associated with anatomy and physiology, from human cells and tissues to surface anatomy</li> <li>Describe the anatomy of the various body systems, namely the structures and functions of the skin and appendages, the musculoskeletal system, the central and peripheral nervous system, the endocrine system, the reproductive system, the cardiovascular system, the lymphatic system, the lungs and respiratory system, the digestive tract and the urinary system.</li> <li>Discuss the physiology of the various body systems in relation to the anatomy and function of these systems.</li> </ul>
Biodiversity	BIODIY1	100%	0%	5	20	This module will enable you to gain the relevant introductory biological background applicable to Chiropractic and Complementary Medicine in the following topics: An introductory view of life; The cell; Genetic basis of life; Evolution; Microbiology and Evolution; Plant Evolution and Biology;	1. Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biol

						Animal Evolution and Diversity.	<p>ological concepts.</p> <p>2. Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>3. Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>4. Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>5. Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>6. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Chemistry1	CETCHY 1	50%	50%	5	20	The primary purpose of this module is to develop	<p>1. Defining the science called</p>



					<p>the basic knowledge and understanding of chemical principles and techniques of general chemistry as required for further modules in Chiropractic and Homoeopathy.</p>	<p>chemistry and introducing some fundamental concepts. Make and record measurements of the properties and chemical behavior of matter.</p> <p>2. Explain the atomic theory, discuss atomic structure, and finally describe the periodic table, which organizes the elements according to:</p> <p>2.1 Atomic theory of matter</p> <p>2.2 The structure of the atom</p> <p>2.3 Nuclear structure; isotopes</p> <p>2.4 Atomic masses</p> <p>2.5 Periodic table of the elements</p> <p>2.6 Chemical formulas, molecular and ionic substances</p> <p>2.7 Naming simple compounds</p> <p>2.8 Writing chemical equations</p> <p>2.9 Balancing chemical equations</p> <p>3. Establish a critical relationship between the mass of a chemical substance and the quantity of that substance (in moles). Explore how the percentage composition and mass percentage of the elements in a chemical substance can be used to determine the chemical formula.</p>
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						<p>Develop a molar interpretation of chemical equations, which then allows for calculation of the quantities of reactants and products.</p> <p>4.Explore how molecular and ionic substances behave when they dissolve in water to form solutions. Investigate several important types of reactions that typically occur in aqueous solution: precipitation reactions, acid–base reactions, and oxidation–reduction reactions. Quantitatively describe solutions using concentration. Finally, use chemical reactions in aqueous solution, determine the amount of substance or species present in materials.</p> <p>5.The Gaseous State</p> <p>Explain the quantitative relationships that describe the behavior of gases and develop a model of gases as molecules in constant random motion.</p> <p>6.Thermochemistry</p> <p>Understand the basic properties of heats of reaction and how to measure them, including how to use them.</p> <p>7.Discuss the nature of light. Understand the formation of chemical bonds and electronic structure of atoms. Discuss some basic notions of</p>
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						<p>quantum mechanics, which is the theory currently applied to extremely small particles, such as electrons in atoms.</p> <p>8. Able to characterize an atomic orbital by four quantum numbers: <math>n</math>, <math>l</math>, <math>m_l</math>, and <math>m_s</math>. Discuss how electrons are distributed among the possible orbitals of an atom. Appreciate how the periodic table can be explained by the periodicity of the ground-state configurations of the elements</p> <p>9. Describe and discuss basic concepts of chemical bonding</p> <p>10. Predict the molecular geometry of a molecule—that is, its general shape as determined by the relative positions of atomic nuclei—with a simple model: the valence-shell electron-pair repulsion model.</p> <p>Explore molecular geometry, by explaining chemical bonding by means of valence bond theory, and be able to give insights into why bonds form and why they have definite directions in space, giving particular molecular geometries</p> <p>11. Organic Chemistry</p> <p>Define organic chemistry using terms such as functional groups,</p>
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							<p>saturated or unsaturated, aromaticity and homologous series and be able to name and draw structures of the following classes of organic molecules:</p> <ul style="list-style-type: none"> <li>• Alkanes</li> <li>• Alkenes</li> <li>• Alkynes</li> <li>• Aromatic compounds</li> <li>• Alkyl halides</li> <li>• Alcohols and phenols</li> <li>• Ethers and thiols</li> <li>• Aldehydes and ketones</li> <li>• Carboxylic acids and derivatives</li> </ul> <p>12. Investigate the diverse chemistry of transition elements. Transition elements can form a distinct set of substances (often highly colored) from complex ions called coordination compounds.</p>
Chiropractic Principles and Practice 1	CPPCHY 1	100%	0%	5	20	This module introduces theoretical constructs and history of the profession relating to the chiropractic profession.	<p>On completion the student will be able to</p> <ul style="list-style-type: none"> <li>• Have a good understanding of the History of Chiropractic.</li> <li>• Discuss the different types of Chiropractic techniques.</li> <li>• Have a comprehensive understanding of the different theories of Chiropractic.</li> </ul>

							<ul style="list-style-type: none"> <li>Understand the role of chiropractic in the health arts and the scope of chiropractic, and its indications and contraindications</li> </ul>
Chiropractic Principles and Practice 2	CPPCHY 2	100%	0%	7	20	This module introduces basic chiropractic principles including aspects relating to motion palpation, evidence based chiropractic and the biopsychosocial model, and evidence relating to safety and effectiveness of techniques in the profession	<p>On completion the student will be able to</p> <ul style="list-style-type: none"> <li>Explain how evidence based principles are applied in the chiropractic context</li> <li>Discuss the relevant research relating to safety and effectiveness of chiropractic</li> <li>Discuss the biopsychosocial model as it relates to chiropractic.</li> <li>Demonstrate motion palpation of the spine</li> <li>Demonstrate basic manipulation techniques</li> </ul>
Chiropractic Principles and Practice 3	CPPCHY 3	100%	0%	7	25	This module develops the students ability to perform basic spinal manipulative techniques, with a focus on biomechanics of manipulation and evidence based approaches.	<p>On completion the student will be able to</p> <ul style="list-style-type: none"> <li>Become re-acquainted with the osteology of the vertebral column and the pelvis.</li> <li>Understand the location of the basic anatomical landmarks of the musculoskeletal system (living anatomy pertaining specifically to the practice of chiropractic) and be able to apply this information in the practice of manipulative adjusting procedures.</li> <li>Understand and apply anatomical spinal levels to the vertebral column on a patient.</li> <li>Evaluate posture in</li> </ul>

						<p>the standing positions.</p> <ul style="list-style-type: none"> <li>• Assess the biomechanical function of the vertebral column using motion palpation technique.</li> <li>• Assess every such joint of the vertebral column in all directions of range of motion and further to describe restricted ranges of motion as such detected on motion palpation.</li> <li>• Understand and describe the functional anatomy of the vertebral column and the pelvis in order to understand, visualize and ably perform the practice of motion palpation of the vertebral column.</li> <li>• Become acquainted, acquire and perfect the basic chiropractic technique set-ups in all positions across the four areas of the vertebral column (cervical, thoracic, lumbar and pelvis areas).</li> <li>• Competently manipulate a joint at any prescribed level using any of the techniques in this course in a controlled environment i.e. under supervision by a qualified Chiropractor.</li> <li>• To begin to think in a clinical manner with regard to the presentation of uncomplicated cases in the management of a neuromusculoskeletal problem.</li> </ul>
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							<ul style="list-style-type: none"> <li>• Understand the basic research validating Chiropractic as the choice of treatment available for the management of back pain, neck pain and headache of neuromusculoskeletal origin.</li> <li>• Become generally acquainted with some of the measurement tools available for the subjective measurement of pain and disability as they pertain to lower back and neck pain.</li> </ul>
Chiropractic Principles and Practice 4	CPPCHY 4	100%	0%	8	25	<p>This module presents chiropractic spinal manipulative techniques, and contra-indications and the appropriate assessments techniques at an advanced level for each technique.</p>	<p>On completion of this module, student should be able to:</p> <ul style="list-style-type: none"> <li>• Discriminate the relevant listings for the specific adjustment techniques.</li> <li>• Perform the adjustment correctly, with knowledge of the correct patient position, doctors position, contact and type of thrust.</li> <li>• Evaluate the biomechanics of the spine with relevance to the adjustment in terms of patient management.</li> <li>• Arrange the contra-indications and precautions of chiropractic manipulative therapy.</li> <li>• Effectively utilize the theoretical knowledge acquired and apply it practically to choose</li> </ul>

							the correct procedures to be utilized on patients
Clinical and Applied Biomechanics 4	CABCHA 4	100%	0%	8	10	This module will present the physical properties and mechanical behavior of body tissues, including mechanisms of injury and pathological processes and the necessary spinal biomechanical knowledge required in clinical chiropractic practice, in specific relation to spinal manipulation and rehabilitation.	On completion of this module the student will be able to: <ul style="list-style-type: none"> <li>• Arrange with various biomechanical definitions concepts.</li> <li>• Organise anatomy and function of body tissues and relate this to their mechanical behaviour.</li> <li>• Distinguish the biomechanics of separate spinal regions in detail including clinical application to common spinal pathologies.</li> <li>• Discriminate the common postural faults and provide rehabilitative protocols.</li> </ul>
Clinical Chiropractic 4	CLCCHY 4	100%	0%	8	25	This module presents the basis from which to manage all patients that you will treat. This course provides a tangible link between theoretical knowledge and practice. It will present knowledge which will enable a determination of which cases may be treated by Chiropractors and which will have to be referred out to other health care professionals.	On completion of this module as student should be able to: <ul style="list-style-type: none"> <li>• Perform a Cervical spine regional examination to formulate a diagnosis</li> <li>• Perform a Lumbar spine regional examination to be able to formulate a diagnosis</li> <li>• Have a comprehensive understanding of the different conditions that may affect the human spine in the assessment of a patient</li> <li>• to differentiate and diagnose the various conditions that may affect the human spine.</li> <li>• Know what special investigations and additional tests may be required to diagnose a specific condition.</li> </ul>



							<ul style="list-style-type: none"> <li>Have a good understanding of the various congenital anomalies (abnormalities) that may affect the spine and how these may affect CMT treatment options.</li> </ul>
Clinical Diagnostics 3	CLDCHY 3	100%	0%	7	20	<p>This module introduces the physical examination of patients in a systematic manner to determine and identify abnormal findings</p>	<p>On completion the student will be able to:</p> <ul style="list-style-type: none"> <li>Outline the steps involved in case taking and the approach to a patients and their symptoms</li> <li>Take a case from a patient, including a comprehensive health history, presenting complaints and a review of systems</li> <li>Explain the concepts associated with the process of differential diagnosis</li> <li>Identify diagnostic tests and special investigations that may be performed for each body system</li> <li>Conduct a general survey of a patient, including vital signs (blood pressure, pulse rate, respiratory rate and temperature) and general observations</li> <li>Perform a physical examination on a patient, including all relevant examinations that must be completed for the assessment of each system and at various life stages.</li> </ul>
Clinical Practice 4	CPRCHY 4	100%	0%	8	25	<p>This module introduces Good Medical Practice and Clinical Practice relating to:</p> <ul style="list-style-type: none"> <li>Haematology</li> <li>Cardiovascular</li> <li>Peripheral Vascular</li> <li>Respiratory</li> <li>Neurology</li> </ul>	<p>On completion the student will be able to:</p> <ul style="list-style-type: none"> <li>Identify and solve clinical problems, including identifying and implementing basic therapeutic interventions for pre-</li> </ul>

						<ul style="list-style-type: none"> <li>• Musculoskeletal</li> <li>• Dermatology</li> <li>• Mental</li> <li>• Endocrinology</li> <li>• Gastro-intestinal</li> <li>• Genito-urinary</li> <li>• Paediatrics</li> <li>• Infectious diseases</li> <li>• Head and neck (Ear, Nose, Throat)</li> </ul>	<p>diagnosed patients</p> <ul style="list-style-type: none"> <li>• Make responsible decisions using critical and creative thinking.</li> <li>• Work effectively with others as a member of a team, group, organisation, community.</li> <li>• Critically evaluate information through the process of collecting, analyzing and organizing information</li> <li>• Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion.</li> <li>• Use science and technology effectively and critically, showing responsibility towards the environment and health of others</li> </ul>
Clinical Psychology	CLPCHY 3	100%	0%	7	15	<p>A student can be deemed competent if:</p> <ul style="list-style-type: none"> <li>• Concepts to understand the following; Abnormal Behavior, Psychological and behavioral disorders: personality disorders, eating disorders, mood disorders, anxiety disorders, schizophrenia, substance abuse and addictions, somatoform and dissociative disorders, cognitive disorders, attention-deficit/hyperactivity disorder (ADHD), conduct problems (CP), sleep disorders, elimination disorders and chronic illness can be applied.</li> </ul>	<p>On completion the student will be able to apply concepts to:</p> <p>Understand the following;</p> <ul style="list-style-type: none"> <li>• Abnormal Behavior</li> <li>• Psychological and behavioral disorders: personality disorders, eating disorders, mood disorders, anxiety disorders, schizophrenia, substance abuse and addictions, somatoform and dissociative disorders, cognitive disorders, attention-deficit/hyperactivity disorder (ADHD), conduct problems (CP), sleep disorders, elimination disorders, elimination</li> </ul>

						<ul style="list-style-type: none"> <li>• Legal and Ethical Issues in Abnormal Psychology, Clinical Assessment and Diagnosis, Developmental &amp; Learning Disorders, Child Maltreatment and Non-accidental trauma can be explained and applied in the clinical environment.</li> <li>• The contextualization of an Integrative Approach to Abnormal Child Psychology and counselling skills are understood and an overview can be given and applied as applicable.</li> </ul>	disorders and chronic illness  •Legal and Ethical Issues in Abnormal Psychology  •Clinical Assessment and Diagnosis  •Developmental & Learning Disorders  •Child Maltreatment and Non-accidental trauma  •Overview and contextualization of an Integrative Approach to Abnormal Child Psychology  •Counselling skills
Human Biochemistry and Disease 1	HBDCHY 2	100%	0%	7	25	<p>This course aims to familiarize the student with the biochemistry as it relates to human processes and their causal link to diseases.</p>	<p>On completion the student will be able to:</p> <ul style="list-style-type: none"> <li>•Understand and describe the common functional groups and bonds in biochemistry as well as describe the importance and special properties of water.</li> <li>•Describe the concepts and underlying principles of pH and buffers and do calculations relevant to it.</li> <li>•Describe the general properties, kinetic and mechanism of enzymes, their different classes and explain their function and general reaction of each class.</li> <li>•Explain fully the relationship between enzymes, coenzymes and vitamins, as well as give the chemical structure, biochemical name, occurrence and the biochemical function of each vitamin.</li> </ul>

							<ul style="list-style-type: none"> <li>•Explain the reaction mechanisms of multisubstrate reactions, as well as the different types of enzyme inhibition encountered.</li> <li>•Define intermediary metabolism.</li> <li>•Describe the chemical composition of DNA and RNA in detail.</li> <li>•Understand the metabolism of amino acids and proteins</li> <li>•Understand the metabolism of carbohydrates</li> <li>Understand lipid metabolism</li> </ul>
Medical Microbiology	MDMCHA 2	100%	0%	6	10	<p>The module aims at preparing students to discuss and apply microbiology principles, procedures and equipment in relation to the vocational degree in Chiropractic or Homoeopathy</p>	<p>On completion of this learning event, students should be able to:</p> <ul style="list-style-type: none"> <li>•Describe important discoveries in microbiology and explain their influence in modern times</li> <li>•Describe the structure and characteristics of the cell membrane</li> <li>•Describe interactions between micro-organisms and their human hosts</li> <li>•Explain selected examples of serological tests</li> <li>•Discuss characteristic, pathogenesis, transmission and effects of selected pathogenic microbes: <ul style="list-style-type: none"> <li>•Staphylococcus</li> <li>•Streptococcus (S. pyogenes, S.pneumoniae and viridans)</li> <li>•Neisseria</li> <li>•Clostridium (C. tetani, C. botulinum and C. perfringens)</li> <li>•Mycobacteria</li> <li>•Enterobacteriaceae (Salmonella,</li> </ul> </li> </ul>

							<p>Shigella, Escherichia coli)</p> <ul style="list-style-type: none"> <li>•Vibrio cholera</li> <li>•Give a brief overview of Yeasts</li> <li>•Describe the classification and characteristics of moulds.</li> <li>•Give an overview of medically important protozoa and parasites and their diseases and life cycles</li> <li>•Give a brief overview of Rickettsia, Chlamydia and Mycoplasma, their cell structures and roles in disease</li> <li>•Give an overview of virus characterisation and classification.</li> <li>•Describe control of micro-organisms</li> </ul>
Myofascial and Auxiliary Therapies 3	MATCHY 3	100%	0%	7	25	<p>This module is presented to equip the students with the knowledge and skill to perform a number of ancillary techniques which may be used to facilitate the relief of pain in conjunction with the chiropractic manipulation.</p>	<p>On completion the student will be able to</p> <ul style="list-style-type: none"> <li>• Review the different types of pain as well as their causes and apply the theories of pain.</li> <li>• Differentiate the mechanism of pain relief.</li> <li>• Explain the modulation of pain and be able to utilize the various manual and electrotherapies effectively and safely.</li> <li>• Explain the effects and uses of the various manual and electrotherapies.</li> <li>• Explain the contra-indications and precautions of the manual and electrotherapies.</li> <li>• Effectively demonstrate the theoretical knowledge of each modality and apply it to the practical application.</li> </ul>
Myofascial and Auxiliary Therapies 4	MATCHB 4	100%	0%	8	10	<p>This module will present common myofascial trigger point regions,</p>	<p>On completion of this module students should be able to:</p>

						with emphasis on dry needling techniques of spinal musculature	<ul style="list-style-type: none"> <li>Describe the anatomy, innervation and function of the muscles relevant to this course.</li> <li>Explain the trigger points in these muscles.</li> <li>Comment on and draw the referred pain patterns for these muscles.</li> <li>Appraise the symptoms exhibited by specific muscles due to the presence of myofascial trigger points.</li> <li>Diagnose specific myofascial conditions and give possible differential diagnoses.</li> <li>Discriminate activating and perpetuating factors for each muscle.</li> <li>Appraise a patient and locate trigger points.</li> <li>Treat myofascial trigger points using: <ul style="list-style-type: none"> <li>Ice and stretch techniques</li> <li>Dry needling techniques</li> <li>Post isometric relaxation</li> <li>Passive stretching</li> </ul> </li> <li>Construct a plan of corrective actions and advice to the patient.</li> <li>Prescribe home based exercises to stretch and strengthen the involved muscles.</li> </ul>
Pathology 3	PATCHY 3	100%	0%	7	20	This module has the primary purpose of providing the learner with a well-rounded broad knowledge base and theory that enables them to describe the aetiology, pathogenesis, morphological changes	Successful completion of this module will equip the student with the theoretical knowledge necessary to explain the symptoms manifested by

						and their clinical significance of specific disease processes as they affect particular organs or systems.	patients and provide a sound foundation for rational clinical care and therapy.
Personal and Professional Development 1	PPDCHY 1	100%	0%	5	10	This module introduces life skill relating to academic progress, skills and communication. Introduction to an African language will form part of this module.	<p>On completion the student will be able to:</p> <ul style="list-style-type: none"> <li>• Use processes and systems of learning management within the University</li> <li>• Use the Harvard Date Author academic referencing system</li> <li>• Implement various study methods</li> <li>• Identify and utilise formats for writing essays and formal report.</li> <li>• Interpret material and form links between concepts and theories producing a coherent argument</li> <li>• Develop verbal and written reasoning and fluency.</li> <li>• Develop their ability to write effectively using academic and business conventions such as essays and formal reports.</li> </ul>
Personal and Professional Development 2	PPDCHY 2	100%	0%	7	10	This module introduces concepts relating to personal development, evidence based practice, professional communication, referencing formats.	<p>On completion the student will be able to</p> <ul style="list-style-type: none"> <li>• Identify their personal strengths and weaknesses in relation to their degree programme and the expectations of the professional environment or potential employers.</li> <li>• Work independently and in groups</li> <li>• Identify appropriate actions they should</li> </ul>

							<p>take to enhance their personal qualities and competences in relation to their life and their career</p> <ul style="list-style-type: none"> <li>•Improve their ability to study effectively and efficiently at undergraduate level</li> <li>•Interpret material in an original and evaluative way</li> <li>•Demonstrate techniques for presentations</li> <li>•Use a variety of information sources in their research and learning activities</li> <li>•Keep effective records of their learning and progress towards personal, academic and career goals</li> <li>•Plan, organise and structure work that is coherent, fluent and accurate.</li> <li>•Write effectively using academic and business conventions, such as essays and formal reports.</li> </ul>
Pharmacology	PHMCHA3	100%	0%	6	10	Introduction to Pharmacology as related to health care and management in general.	<p>On completion the student will be able to understand and apply the principles of pharmacology in terms of:</p> <ul style="list-style-type: none"> <li>• Drugs Affecting the Autonomic Nervous System</li> <li>• Pain and inflammation</li> <li>• Drugs Affecting the Immune System</li> <li>• Drugs Affecting Cardiovascular System</li> <li>• Drugs Affecting Central Nervous System</li> <li>• Drugs Affecting the</li> </ul>



							Endocrine System • Respiratory System • Gastro-intestinal System • Chemotherapeutic Drugs
Physics of Health Sciences 1	PHYCHA 1	50%	50%	5	10	This modules introduces physics concepts such as:  • Mechanics • Fluids • Heat • Waves and Sound • Electricity and Electromagnetism • Optics • Atomic Physics • Nuclear Physics	On completion the student will be able to as:  • Use scientific notation and the decimal system to manipulate SI-units. • Apply knowledge of vector theory in mechanical problems • Explain the concepts of work done, kinetic energy, potential energy, the law of conservation of energy, power • Explain heat capacity, latent heat, linear-, area-, volume-expansivities. • Define the terms density, relative density and pressure • Explain the production of static electricity by friction using the electron theory • Describe the nature and properties of alpha, beta and gamma radiations, derive from basic principles the law of radioactive decay • Explain wave-particle duality, quantum, quantized photon, quantization of energy, photo electric effect, wave nature of electrons • Explain the production and

							transmission of sound in a medium recognise sound as a longitudinal wave and describe the different types of ultrasound scan.
Physiology 2	PHYCHY 2	100%	0%	6	10	This modules introduces advanced applications of human physiology	<p>On completion the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe the structure and the functions of the integumentary system and its associated appendages</li> <li>• Describe the physiological mechanisms involved in movement</li> <li>• Explain the physiological mechanisms of communication, integration and control of the nervous system.</li> <li>• Relate the structures and functions of the endocrine glands and reproductive organs to their functions</li> <li>• Describe the anatomy and physiology of the circulatory system.</li> <li>• Describe the structure and function of the immune system, highlighting the role of the lymphatic system.</li> <li>• Describe the anatomy and physiology of the respiratory system.</li> <li>• Describe the anatomy and physiology of the urinary system.</li> </ul>
Radiology	RADCHB 3	100%	0%	7	10	The overall purpose of this subject is to familiarize students with x-rays and normal	Understand where the x-ray image comes from, the different components in Radiology and when to refer to which

						<p>Anatomy visible on x-rays.</p>	<p>one and the basic terminology.</p> <p>When the learner has completed the sections he/she should be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• normal anatomy of the hand looks like on x-ray and identify the different structures.</li> <li>• normal anatomy of the wrist looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the radius, ulna and elbow joint look like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the humerus and shoulder joint look like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the foot and ankle look like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the tibia, fibula and knee look like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the hip looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the pelvis looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the lumbar spine looks</li> </ul>
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							<p>like on x-ray and identify the different structures.</p> <ul style="list-style-type: none"> <li>• what normal anatomy of the thoracic spine looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the cervical spine looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the thorax looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the abdomen looks like on x-ray and identify the different structures.</li> <li>• what normal anatomy of the skull looks like on x-ray and identify the different structures.</li> </ul>
Radiology 4	RADCHY 4	100%	0%	8	20	<p>The module serves to provide learners with sound basic theoretical knowledge and practical skills pertaining to all aspects of diagnostic radiography. It will enable learners to become competent in producing and interpreting diagnostic radiographs by applying their attained knowledge in the following academic year in a clinical context. The primary aim of the module is to extend the skills of chiropractic learners to include radiographic and radiologic skills that can be utilized in the diagnosis and treatment planning of chiropractic patients.</p>	<p>Describe the imaging components &amp; imaging process in order to consistently produce radiographic images of optimal quality. Section 1: Units 1 - 3</p> <ul style="list-style-type: none"> <li>• Describe the x-ray equipment, the production of x-rays and its interaction with matter in order to develop an understanding of the complexity of the equipment and the potential biological damage associated with diagnostic procedures. Section 1: Units 4 – 6</li> <li>• Identify the biological effects of radiation on the</li> </ul>

						<p>human body to enable responsible decision making when requesting diagnostic procedures on patients. Section 1: Units 7 &amp; 8</p> <ul style="list-style-type: none"> <li>• State the basic principles and applications of Magnetic Resonance Imaging &amp; Computer Tomography within the chiropractic context. Section 2: Unit 1</li> <li>• Demonstrate a sound knowledge of the basic principles and terminology pertaining to diagnostic radiography in order to function and communicate efficiently within the field. Section 2: Unit 2</li> <li>• Explain &amp; perform the radiographic procedures covered in the module with the aim to produce radiographic images of a good diagnostic quality. Section 2: Units 3 - 10</li> <li>• Apply sound, integrated knowledge of radiographic anatomy, physiology and pathology to ensure accurate assessment of images in terms of quality and pattern recognition. Section 2: Units 3 - 10</li> <li>• Evaluate the quality of radiographic images to ensure consistency in the production of images with optimal</li> </ul>
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							<p>diagnostic value. Section 2: Units 3 - 10</p> <ul style="list-style-type: none"> <li>Assess radiographic images in terms of pattern recognition to distinguish between normal and abnormal appearances. Section 2: Units 3 - 10</li> <li>Discuss basic patient care principles relative to the examination and condition of the patient to ensure that the wellbeing of the patient is maintained. Section 2: Units 3 - 10</li> <li>Apply radiation protection measures to limit radiation exposure to patients, public &amp; staff. Section 1: Unit 7 &amp; Section 2: Units 3 – 1</li> <li>Demonstrate a sound knowledge of, and integration of bioethical principles, human rights and patient rights into all aspects of patient care and professional communication with patients, colleagues and the public.</li> </ul>
Research Methodology 4	REMCHA4	100%	0%	8	5	<p>This module presents the following components:</p> <ul style="list-style-type: none"> <li>Research Concepts</li> <li>Research Ethics and Integrity</li> <li>The Scientific Method</li> <li>Quantitative Research Methods</li> <li>Qualitative Research Methods</li> <li>Data Analysis and Theory in Qualitative and Quantitative Research</li> <li>Review of CM Research Articles</li> <li>Introduction to Mixed Methods Research</li> </ul>	<p>On completion of this module students should be able to:</p> <ul style="list-style-type: none"> <li>Discuss the basic concepts of research methodology</li> <li>Identify and initiate an appropriate research project</li> <li>Describe the processes of designing a research project and collecting data</li> <li>Understand statistical analysis</li> </ul>

							<p>and interpretation of results</p> <ul style="list-style-type: none"> <li>•Review and critique research</li> <li>•Prepare a research proposal</li> <li>•Critically discuss ethical consideration in research, including plagiarism</li> </ul>
Research Project 4	REPCHB 4	100%	0%	8	5	This module is designed to allow for demonstration of basic research skills in terms of proposal development and research design	<p>On completion of this module students should be able to:</p> <ul style="list-style-type: none"> <li>• Formulate a research report in the field of chiropractic</li> </ul>
Sociology of Health and Health Care	SOHCHB1	100%	0%	6	10	This module introduces the fundamentals of health and healthcare to provide a broad theoretical foundation for further studies related to complementary health care.	<p>On completion the student will be able to</p> <ul style="list-style-type: none"> <li>• Discuss the fundamentals of health and healthcare</li> <li>•Critically differentiate between the major perspectives associated with the field of psychology</li> <li>•Demonstrate an understanding of the biological processes and how they influence human behavior</li> <li>•Demonstrate an understanding of awareness and the various levels experienced.</li> <li>•Compare the three types of learning.</li> <li>•Describe the processes involved in memory: coding, storage and retrieval</li> <li>•Explain the various types of intelligence</li> <li>•Describe motivation and the different theories of emotion</li> </ul>

							<ul style="list-style-type: none"> <li>•Understand the role of counselling in healthcare</li> <li>•Differentiate between the different theories of personality</li> </ul>
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## MASTER OF HEALTH SCIENCES IN CHIROPRACTIC (M9C01Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Chiropractic Clinical Practice 5A	CHP9XA1	100%	0%	9	9		<p>On completion of the WIL component the student should be able to:</p> <ul style="list-style-type: none"> <li>•Demonstrate competency in specialised chiropractic skills in clinical assessment, diagnosis, treatment and management of conditions and/or pathology affecting the body under the supervision of a qualified chiropractic clinician.</li> <li>•Demonstrate the ability, under supervision to recognise and appraise systemic conditions and the signs and symptoms that impact on the patient or in a simulated scenario for the purpose of treatment, referral and subsequent management.</li> <li>•Demonstrate under supervision practical application of the principles, proven techniques and specialised skills in the promotion of health, the prevention and rehabilitation.</li> <li>•Analyse clinical data and case studies by integrating theory and practical knowledge within the fields of</li> </ul>



							chiropractic. •Analyse differential diagnoses and implement management protocols and prevention plans in terms of scope of practice.
Chiropractic Clinical Practice 5B	CHP9XB 2	100%	0%	9	9		<p>On completion of the WIL component the student should be able to:</p> <ul style="list-style-type: none"> <li>•Demonstrate competency in specialised chiropractic skills in clinical assessment, diagnosis, treatment and management of conditions and/or pathology affecting the body under the supervision of a qualified chiropractic clinician.</li> <li>•Demonstrate the ability, under supervision to recognise and appraise systemic conditions and the signs and symptoms that impact on the patient or in a simulated scenario for the purpose of treatment, referral and subsequent management.</li> <li>•Demonstrate under supervision practical application of the principles, proven techniques and specialised skills in the promotion of health, the prevention and rehabilitation.</li> <li>•Analyse clinical data and case studies by integrating theory and practical knowledge within the fields of chiropractic.</li> <li>•Analyse differential diagnoses and implement management protocols and prevention plans in terms of scope of</li> </ul>

							practice.
Chiropractic Principles and Practice 5	CPP9XY 1	100%	0%	9	9	<p>The overall purpose of this subject is:</p> <ul style="list-style-type: none"> <li>•Give students the relevant applicable knowledge regarding the legislation pertaining to the profession</li> <li>•Teach students the processes required in the UJ Chiropractic Clinic</li> <li>•Assist in integration of theory into practical patient based scenarios</li> <li>•Teach students the ability to assess and treat joint dysfunction in extremity joints</li> <li>•Introduce students to basic principles of geriatric and paediatric chiropractic</li> <li>•Allow students to develop skills in reading of radiographs</li> </ul>	<p>On completion of this module the student should be able to:</p> <p>Understand and apply the process and procedure to adequately perform the functions as in the UJ day clinic.</p> <p>Have a clear understanding of the professional associations and councils, and how they are interrelated.</p> <p>Communicate effectively with professionals of other disciplines, chiropractic, and patients.</p> <p>Have basic knowledge of paediatric conditions, and chiropractic treatment thereof.</p> <p>Have basic knowledge of geriatric conditions, and chiropractic treatment thereof.</p> <p>Assess and treat joint dysfunction in extremity joints.</p> <p>Review and write a report on abnormal findings of radiographs.</p>
Clinical and Applied Biomechanics	CAB9XA 1	100%	0%	9	9	<p>The purpose of this module is to</p> <ul style="list-style-type: none"> <li>•Allow you to get to appreciate the structure and function of the peripheral joints of the body as well as to tie them all together into one biomechanical chain.</li> <li>•This will equip you to treat your patients as a whole and not just as a component part of the whole.</li> <li>•It allows you to realise the interdependence of the parts of the complete unit of the body.</li> </ul>	<p>At the end of the year the student should be able to:</p> <p>Describe and analyse normal and abnormal biomechanics of peripheral joint.</p> <p>Explain the principles of proprioception and core stability and develop a programme specifically related to different conditions</p> <p>Analyse posture and gait, and relate this to specific conditions</p>
Clinical Chiropractic 5	CHC9XY 1	100%	0%	9	9	<p>The overall purpose of this subject is:</p> <ul style="list-style-type: none"> <li>•To equip the 5th year</li> </ul>	<p>On completion of this module the student will be able to:</p>

						<p>chiropractic students with the knowledge and skill to assess, diagnose and treat the extremity joints of the body.</p> <ul style="list-style-type: none"> <li>•To provide the student with the knowledge to know when and how to treat extremity injuries and pathologies.</li> <li>•To provide the student with a forum to develop a critical thought process and approach to assessment and treatment of neuromusculoskeletal disorders.</li> </ul>	<p>Competently assess all extremity joints. Diagnose and appropriately treat and/or refer extremity joint problems. Refresh and have a good understanding of extremity anatomy. Develop a good understanding of the mechanisms of injury and their effects on extremity joints. Develop a critical thought process and approach to the assessment, diagnosis and treatment of extremity joints. Explain and apply the principles and application of rehabilitation of extremity joint injuries.</p>
Myofascial and Auxiliary Therapies 5	MAT9XA1	100%	0%	9	9	<p>The overall purpose of this subject is:</p> <ul style="list-style-type: none"> <li>•To equip the 5th year chiropractic students with the knowledge and skill necessary to ensure that he/she will be able to adequately and independently assess and treat myofascial trigger points.</li> <li>•To familiarize 5th year chiropractic students with the neurophysiology involved in the management of pain arising from soft tissues.</li> </ul>	<p>On completion of this module the student will be able to:</p> <p>Describe the anatomy, innervation and function of the muscles relevant to this course.</p> <p>Locate the trigger points in these muscles.</p> <p>Describe and draw the referred pain patterns for these muscles.</p> <p>Identify the symptoms exhibited by specific muscles due to the presence of myofascial trigger points.</p> <p>Diagnose specific myofascial conditions and give possible differential diagnoses.</p> <p>Identify activating and perpetuating factors for each muscle.</p> <p>Examine a patient and locate trigger points.</p> <p>Treat myofascial trigger points using:</p>

							a) Ice and stretch techniques b) Dry needling techniques c) Post isometric relaxation d) Passive stretching Provide corrective actions and advice to the patient. Prescribe home based exercises to stretch and strengthen the involved muscles
Practice Management and Jurisprudence	PMJ9X01	50%	50%		16	The purpose of this module is to equip learners with a thorough introduction to the entrepreneurial process. •It further enhances the non-business student to successfully launching and growing his or her own venture. •Additionally the module will equip students to think conceptually and critically about the role of the individual in developing entrepreneurial practices in various occupations contexts. •The module is interdisciplinary in nature with the aim to equip students with an entrepreneurial mindset.	<b>CBE Module</b> On completion of this module the learner will be able to: •Explain the key theories of entrepreneurship. •Identify and explain the factors that impact when starting a new venture. •Identify entrepreneurial risks •Explain and describe the different sources of finance and the implications of selecting a specific source. •Draw up a business plan.
Research Project and Dissertation 5A	RPD9XA1	100%	0%	9	9	The purpose of this module is to critically use and interrogate multiple sources of literature in order to develop and contribute towards research output in a Chiropractic related field and to continue with lifelong learning and become a reflective practitioner.	On completion to this module, the student will be required to submit a minor dissertation.
Research Project and Dissertation 5B	RPD9XB2	100%	0%	9	9	The purpose of this module is to critically use and interrogate multiple sources of literature in order to develop and contribute towards research output in a Chiropractic related field and to continue with lifelong learning and become a reflective practitioner	On completion to this module, the student will be required to submit a minor dissertation.

Research Project and Dissertation 5C	RPD9XC 2	100%	0%	9	9	The purpose of this module is to critically use and interrogate multiple sources of literature in order to develop and contribute towards research output in a Chiropractic related field and to continue with lifelong learning and become a reflective practitioner	On completion to this module, the student will be required to submit a minor dissertation.
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### HS12.3 DEPARTMENT OF COMPLEMENTARY MEDICINE

#### BACHELOR OF HEALTH SCIENCES IN COMPLEMENTARY MEDICINE (B9CM1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Anatomy 2	ANTCHY 2	100%	0%	7	30	The purpose of this module is to enable the student to develop an extensive understanding of the gross anatomy of the human body and basic histology as it applies to the various systems.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Demonstrate an understanding the gross anatomy of the human body including surface anatomy and anatomical landmarks, the anatomy of muscles and the skeletal system, soft tissue anatomy, and the anatomy of the cardiovascular and neural systems</li> <li>Explain the development of the human embryo, including early embryonic development and the embryonic development of the head and neck, and the cardiovascular, gastrointestinal, urinary and reproductive systems</li> </ul> <p>Identify cells and</p>

							histological samples including basic human tissues and tissue samples from the respiratory, cardiovascular, gastro-intestinal, urinary, reproductive, endocrine and lymphatic systems.
Anatomy and Physiology 1	ANPCMY 1	100%	0%	5	35	The purpose of this module is to establish a sound introduction to anatomy and physiology, including human cells and tissue, surface anatomy and systems within the human body.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Understand concepts and systems associated with anatomy and physiology, from human cells and tissues to surface anatomy</li> <li>Describe the anatomy of the various body systems; namely the structures and functions of the skin and appendages, musculoskeletal system, central and peripheral nervous system, endocrine system, reproductive system, cardiovascular system, lymphatic system, the lungs and respiratory system, digestive tract and urinary system</li> </ul> <p>Discuss the physiology of the various body systems in relation to the anatomy and function of these systems.</p>
Applied Homeopathic Materia Medica	AHMCMY 4	100%	0%	8	25	The purpose of this module is to provide the student with the theoretical and research-based knowledge related to homeopathic medicines in order to	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Evaluate principles and</li> </ul>

						<p>develop strategies and formulations to treat and manage various health conditions.</p>	<p>theory of Homeopathy</p> <ul style="list-style-type: none"> <li>• Apply these theories in a practical/clinical setting</li> <li>• Demonstrate the ability to take a homeopathic case: analyse, repertories, find and justify the similimum or fundamental/functional remedy(simile) and differential remedies</li> <li>• Apply the principles of homeopathy to patient management and patient follow-up</li> <li>• Apply posology (potency, repetition of the dose) to cases</li> <li>• Apply the theory of miasms in relation to patient assessment and management</li> <li>• Identify illness, diseases and differentials associated with various systems of the body, commonly encountered in practice</li> <li>• Demonstrate diagnostic procedures</li> <li>• Manage the patient with specific homeopathic remedy and/or related therapies, using a holistic, integrated approach to the patient and their disease</li> <li>• Apply homeopathic drainage in case management.</li> </ul>
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Applied Nutritional Medicine	ANMCMY 4	100%	0%	8	10	The purpose of this module is to integrate theoretical nutritional knowledge with evidence-based practice in the management and treatment of particular health conditions.	At the end of this module the student will be able to:  Integrate the principles of nutritional medicine with evidence-based practice in the treatment and management of common health conditions related to the studied body systems.
Applied Phytotherapy 1	APTCMY 4	100%	0%	8	25	The purpose of this module is to provide the student with the theoretical and research-based knowledge related to herbal medicines in order to develop strategies and formulations to treat and manage various health conditions.	At the end of this module the student will be able to:  <ul style="list-style-type: none"> <li>• Integrate information relating to the principles and theories of phytotherapy, case taking and prescribing</li> <li>• Develop phytotherapeutic protocols related to body systems and their associated health conditions</li> <li>• Formulate herbal medicine treatment strategies and apply to theoretical case studies.</li> </ul>
Basic Life Support	BLSCMA 3	100%	0%	5	4	The purpose of this module is to enable the student to focus on the assessment of the emergency situation and provision of basic life support and basic first aid in order to stabilise patients prior to transfer to the emergency services or other suitable person or entity; and identify and treat common ailments and injuries within the relevant scope.	At the end of this module the student will be able to:  <ul style="list-style-type: none"> <li>• Demonstrate an understanding of emergency scene management</li> <li>• Assess and evaluate an emergency situation</li> <li>• Apply first aid procedures to the life-threatening situation</li> </ul> Identify and treat common ailments and injuries within the



							relevant scope.
Biodiversity	BIODIY1	100%	0%	5	20	<p>The purpose of this module is to gain the relevant introductory biological background in cell and cellular metabolism; mitosis and meiosis; genetics; evolution, ecology and the five kingdoms, and enable the student to develop an elementary but critical understanding of the botany for complementary medicine as it pertains to the kingdoms, structure and habitats of the plants.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of the different cell types, and how they function and survive</li> <li>• Discuss the processes of cell division</li> <li>• Describe the basic concepts associated with genetics and the evolution of cells and organisms</li> <li>• Distinguish between the 5 kingdoms of living organisms</li> <li>• Understand the relationships of living organisms with one another and their environment</li> <li>• Demonstrate an understanding of the plant kingdom, including broad characteristics of the divisions within the kingdom, the diversity and classification of plants</li> <li>• Identify the various habitats and ecosystems of plants</li> <li>• Compare various plants in terms of their structure and function, their components, their metabolism and their reproduction</li> </ul> <p>Discuss the structures of plant cells and the functions of their cell membranes and organelles.</p>

Chemistry 1	CETCHY 1	50%	50%	5	20	<b>Science module</b> The purpose of this module is to develop the basic knowledge and understanding of chemical principles and techniques of general and applied chemistry as required for further modules in the field of complementary medicine.	At the end of this module the student will be able to: <ul style="list-style-type: none"> <li>• Define rate law, rate constant, and reaction order.</li> <li>• Describe how temperature, activation energy, and molecular orientation influence reaction rates</li> <li>• Describe how a catalyst influences the rate of a reaction</li> <li>• Define and where necessary apply: equilibrium-constant expression and equilibrium constant, the law of mass action, homogeneous equilibrium and heterogeneous equilibrium, the reaction quotient, Q and Le Châtelier's principle</li> <li>• Describe the effect of a pressure or temperature change on chemical equilibrium</li> <li>• Understand the relationship between the strength of an acid and that of its conjugate base</li> <li>• Understand the periodic trends in the strengths of the binary acids HX, the rules for determining the relative strengths of oxoacids and the relative acid strengths of a polyprotic acid and its anions.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Write the chemical equations</li> <li>• Describe the pH change of a buffer solution with the addition of acid or base.</li> <li>• Define and give examples of organic concepts</li> <li>• Discuss substitution reactions involving equations and mechanisms of synthesis</li> <li>• Describe elimination reactions involving equations and mechanisms of synthesis</li> <li>• Demonstrate an understanding of addition reactions involving equations and mechanisms of synthesis</li> </ul> <p>Explain reactions involving oxidising and reducing agents.</p>
Clinical Diagnostics 3	CLDCMY 3	100%	0%	7	20	<p>The purpose of this module is to provide the student with the relevant knowledge necessary for case taking, evaluation and management of a patient in a clinical setting.</p> <p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Outline the steps involved in case taking and the approach to a patients and their symptoms</li> <li>• Take a case from a patient, including a comprehensive health history, presenting complaints and a review of systems</li> <li>• Explain the concepts associated with the process of differential diagnosis</li> <li>• Identify diagnostic tests</li> </ul>

							<p>and special investigations that may be performed for each body system</p> <ul style="list-style-type: none"> <li>• Conduct a general survey of a patient, including vital signs (blood pressure, pulse rate, respiratory rate and temperature) and general observations</li> <li>• Perform a physical examination on a patient, including all relevant examinations that must be completed for the assessment of each system and at various life stages.</li> </ul>
Clinical Practice 1	CPRCMY4	100%	0%	8	30	<p>Successful completion of this module will enable a student to competently assess a range of health problems presented in clinical practice and use a wide range of solutions for their recognition, investigation and diagnosis. Students will also be able to begin to identify the correct treatment / management approach of the diagnosed condition.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Identify and solve clinical problems, including identifying and implementing basic therapeutic interventions for pre-diagnosed patients</li> <li>• Make responsible decisions using critical and creative thinking</li> <li>• Work effectively with others as a member of a team, group, organisation, community.</li> <li>• Critically evaluate information through the process of collecting, analysing and organising information</li> </ul>

							<ul style="list-style-type: none"> <li>Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion</li> <li>Use science and technology effectively and critically, showing responsibility towards the environment and health of others</li> <li>Identify the appropriate therapeutic acupuncture protocols as it relates to body systems and disorders</li> </ul> <p>Apply the relevant acupuncture techniques to the treatment of pre-diagnosed conditions in a clinical/practical setting.</p>
Clinical Psychology	CLPCHY 3	100%	0%	7	15	The purpose of this module is to introduce the student to the various theoretical models, psychological disorders and practice & ethics of clinical psychology.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Apply an integrative approach, with emphasis on biological, psychological and social aspects (Biopsychosocial Model) of the aetiology of psychopathology</li> <li>Demonstrate an understanding of the psychological attributes that are deemed important within health and apply this knowledge to the field of clinical psychology</li> <li>Define abnormal behaviour and describe psychological dysfunction,</li> </ul>

							<p>distress, and atypical or unexpected cultural response</p> <ul style="list-style-type: none"> <li>• Describe the clinical manifestations of psychological disorders including important aetiological, diagnostic, and phenomenological similarities and differences between them</li> <li>• Describe the medical complications associated clinical psychological disorders</li> <li>• Discuss the legal aspects to mental health care practice including the legal rights of patients as well as the laws and ethical codes which bind mental health practitioners</li> <li>• Explain the unique factors to consider in the South African context with reference to ethical conduct</li> <li>• Explain current approaches, including assessment, diagnostic practices, treatment modalities and appropriate tools for assessing psychological disorders</li> <li>• Demonstrate patient management skills and referrals</li> <li>• Describe the major categories and disorders related to</li> </ul>
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							<p>physical and mental health and the key features and treatments utilised for each</p> <ul style="list-style-type: none"> <li>• Distinguish between the key characteristics and manifestations of developmental and learning disorders including important aetiological factors, diagnosis, and management of each disorder</li> <li>• Describe the main features of each type of child abuse and their developmental consequences</li> <li>• Apply the techniques of counselling in the clinical healthcare setting</li> <li>• Explain the nature and purposes of counselling and diagnosis and how the DSM is used to help therapists and counsellors make a psychiatric diagnosis or referral.</li> </ul>
Complementary Medicine Practices 1	COPCMY1	100%	0%	5	35	<p>The purpose of this module is to enable the student to develop an elementary but critical understanding of the various complementary medicine disciplines as well as traditional medicine practices in South Africa, with particular emphasis on homeopathy, phytotherapy and acupuncture.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe the various CM professions regulated by the AHPCSA as well as have an understanding of South African TM</li> <li>• Discuss the history, philosophy and principles of homeopathy,</li> </ul>

							<p>phytotherapy and acupuncture</p> <p>Explain the principles of evidenced based practice (EBP) and its role within CM.</p>
Complementary Medicine Practices 2	COPCMY2	100%	0%	6	40	<p>The purpose of the module is to enable the student to develop an in-depth understanding and expansive knowledge base of complementary medicine practices, relating to homeopathy, phytotherapy and acupuncture, and their respective approaches to treatment.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Explain how and why chronic cases are taken compared with acute cases as it pertains to the field of Complementary Medicine</li> <li>• Describe the sources of homeopathic medicines and the techniques used in producing, dispensing and storing these remedies</li> <li>• Demonstrate an understanding of the terminology relating to phytotherapy as well as the various herbal medicine preparations available</li> <li>• Identify the meridians and main acupuncture points of the body</li> <li>• Demonstrate basic needling techniques.</li> </ul>
Complementary Medicine Practices 3	COPCMY3	100%	0%	7	10	<p>The purpose of this module is to enable the student to develop a coherent and critical understanding of complementary practices, in particular acupuncture therapeutics, in order to develop treatment protocols in the management of common conditions/patients.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe in detail the principles and indications for the Bach Flower Remedies, Biochemic Tissue Salts, Electrolyoids, and Gemmotherapy remedies</li> </ul>



							<ul style="list-style-type: none"> <li>Describe the principles of the various therapeutic acupuncture techniques with regards to treatment planning and outcome evaluation</li> <li>Apply the various acupuncture techniques in relation to common medical conditions</li> <li>Differentiate between the various auxiliary and other traditional forms of medicine.</li> </ul>
Compounding and Dispensing Complementary Medicine	CDDCMB4	100%	0%	8	10	The purpose of this module is to provide the student with an in-depth understanding and practical application of the compounding and dispensing of complementary medicines in a practice.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Apply ethical, legal and therapeutic considerations in all facets of dispensing medicines and therapeutic devices</li> <li>Write, evaluate and interpret a prescription</li> <li>Record relevant patient information</li> <li>Compound the required medication according to good manufacturing and good pharmacy practice</li> <li>Dispense the required amount of medication and provide appropriate advice.</li> <li>Advise patients to ensure quality use of medicine and improve health status</li> </ul>

							<ul style="list-style-type: none"> <li>Manage procurement and storage of medicines in terms of legislative and documentation requirements.</li> </ul>
Good Pharmacy Practice	GPPCMA4	100%	0%	8	10	<p>The purpose of this module is to provide the student with an understanding of the requirements for good pharmacy practice as relevant to their scope.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Understand the requirements for pharmacy appearance, control of access and safety of the pharmacy</li> <li>Demonstrate an understanding of the requirements on pharmacy appearance, control of access and safety of the pharmacy</li> <li>Understand the following requirements with the medicine room: Conditions, Storage area, Access control</li> <li>Explain the different storage conditions for different products</li> <li>Identify the requirements of writing and interpreting a prescription, and prescription record keeping</li> <li>Understand the importance of safety in dispensing procedures</li> <li>Advise patients on the correct use of medication</li> <li>Be familiar with patient record</li> <li>Understand the professional and ethical aspects when dealing with patients.</li> </ul>

Homeopathic Materia Medica 1	HMMCMY 3	100%	0%	7	15	The purpose of this module is to provide the student with a sound foundation of homeopathic philosophy, homeopharmaceutics, Materia Medica and case taking.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe the history of homeopathy</li> <li>• Explain and analyse the principles and Law of Homeopathy according to the Organon</li> <li>• Explain the process of conducting a homeopathic proving</li> <li>• Analyse and practically demonstrate the homeopharmaceutics process</li> <li>• Discuss the development of chronic diseases and the interpretation, categorisation and analysis of miasms and constitutional types.</li> <li>• Describe, compare and apply the applications of the polychrests and related remedies</li> <li>• Competently take a homeopathic case and determine the appropriate remedy/ies.</li> </ul>
Homeopathic Materia Medica 2	HMMCMY 4	100%	0%	8	20	The purpose of this module is to provide the student with an in-depth understanding and systematic knowledge base of the Materia Medica remedies used in a homeopathic practice.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Evaluate the characteristic indications of the polychrests, first aid remedies, nosodes, modern remedies, and other outlined groups of remedies</li> </ul> <p>Evaluate a case</p>

							study in terms of miasmatic interpretation.
Human Biochemistry and Disease 1	HBDCMY2	100%	0%	6	20	<p>The purpose of this module is to enable the student to develop an understanding of human biochemistry in assessing disease.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe the common functional groups and bonds in biochemistry as well as the special properties of water</li> <li>• Examine the chemical structures, composition and nature of proteins, carbohydrates and lipids</li> <li>• Describe the general properties of enzymes and how they work</li> <li>• Explain fully the relationship between enzymes, coenzymes and vitamins</li> <li>• Give the biochemical name, occurrence and the function of each vitamin</li> <li>• Discuss the different classes of energy rich compounds and the organic reaction mechanisms</li> <li>• Demonstrate an understanding of the major metabolic pathways and their control mechanisms: the urea cycle, the citric acid cycle, the glycolytic pathway, oxidative phosphorylation etc</li> <li>• Demonstrate an understanding of</li> </ul>

							<p>the basic chemistry and structures of the nucleic acids, which make up the genetic apparatus of the cell</p> <ul style="list-style-type: none"> <li>• Discuss biosynthesis of the nucleic acids and the transfer of genetic information to synthesis of a specified protein (transcription, translation).</li> </ul>
Medical Microbiology	MDMCHA 2	100%	0%	6	10	<p>The purpose of this module is to introduce the principles of microbiology necessary in the field of medicine.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• State the normal flora and infective microorganisms of the human body and describe the host-parasite relationship</li> <li>• List the pathogenic microorganisms, their general characteristics, classifications, nomenclature and methods of identification of bacteria</li> <li>• State the sources, modes of transmission and describe the pathogenesis of the diseases produced by the microorganisms</li> <li>• Describe the mechanisms of immunity of infection</li> <li>• State the suitable antimicrobial agents for treatment and vaccines available for prevention of communicable diseases</li> </ul> <p>Recommend the</p>

							laboratory investigations for making a microbiological diagnosis.
Nutritional Medicine	NTMCMY3	100%	0%	7	15	The purpose of this module is to provide students with fundamental knowledge associated with human metabolism, introducing an understanding of the importance of nutrition in relation to human physiology and health.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of how nutrients relate to human metabolism and health</li> <li>• Outline the principles of nutrition and its role in health and disease prevention</li> <li>• Evaluate the benefits and risks associated with the specialised diets commonly in use</li> </ul> <p>Examine the range of nutritional requirements that impact people at particular life stages.</p>
Pathology	PATCMY3	100%	0%	7	25	The purpose of this module is to provide the student with the knowledge base and theory necessary to have a thorough understanding of the disease process by examining the basic reactions of cells and tissues to the abnormal stimuli that underlie all physical diseases. These fundamental aspects of general pathology are necessary to understand the specific responses of specialised organs and tissues examined in systemic pathology.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Discuss the physiological and pathology changes that take place in cells and how that relates to diseases, injury and healing</li> <li>• Understand the process of inflammation and the role of inflammation in pathology and the development of disease</li> <li>• Understand the processes of fluid homeostasis, and how that relates to oedema, thrombosis and shock</li> <li>• Distinguish the functions of various</li> </ul>

							<p>components of the immune system, and the pathology of immune suppression, immune derangements and auto-immunity</p> <ul style="list-style-type: none"> <li>• Explain the process of carcinogenesis, and how that relates to the clinical manifestations, diagnosis and treatment of cancer</li> <li>• Identify the role of genetics in the development of diseases</li> <li>• Discuss the aetiology, clinical features and diagnosis of common paediatric illnesses</li> <li>• Review the major infectious and environmental diseases in terms of their aetiology, clinical features, diagnosis and treatment</li> <li>• Demonstrate an understanding of the major pathologies that affect the various systems of the body in terms of their pathogenesis, clinical features, diagnosis and treatment.</li> </ul>
Personal and Professional Development 1	PPDCMY1	100%	0%	5	5	The purpose of this module is to enhance the students' ability to benefit from the academic learning process and develop personal, communication and career management skills.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Use processes and systems of learning management within the University</li> </ul>

						<ul style="list-style-type: none"> <li>• Use the Harvard Date Author academic referencing system</li> <li>• Implement various study methods</li> <li>• Identify and utilise formats for writing essays and formal report</li> <li>• Interpret material and form links between concepts and theories producing a coherent argument</li> <li>• Verbal and written reasoning and fluency</li> </ul> <p>Write effectively using academic and business conventions such as essays and formal reports.</p>
Personal and Professional Development 2	PPDCMY2	100%	0%	6	5	<p>The purpose of this module is to enable students to develop skills and competences that enhances their competence in communication, self-management, problem solving, self-confidence, flexibility and the ability to learn effectively.</p> <p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Identify their personal strengths and weaknesses in relation to their degree programme and the expectations of the professional environment or potential employers</li> <li>• Work independently and in groups</li> <li>• Identify appropriate actions they should take to enhance their personal qualities and competences in relation to their life and their career</li> <li>• Study effectively and efficiently at</li> </ul>



							<p>undergraduate level</p> <ul style="list-style-type: none"> <li>• Interpret material in an original and evaluative way</li> <li>• Demonstrate techniques for presentations</li> <li>• Use a variety of information sources in their research and learning activities</li> <li>• Keep records of their learning and progress towards personal, academic and career goals</li> <li>• Plan, organise and structure work that is coherent, fluent and accurate</li> </ul> <p>Write using academic and business conventions, such as essays and formal reports.</p>
Pharmacology	PHMCMA3	100%	0%	6	14	<p>The purpose of this module is introduce the student to the major concepts underpinning pharmacology, mechanisms of drug actions and their therapeutic interventions in disease.</p>	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate a basic understanding of drug naming, pharmacokinetics, and pharmacodynamics</li> <li>• Identify drug interactions and their consequences</li> </ul> <p>Apply the following information for all drugs in the different body systems:</p> <p>Pharmacological class, Mechanism of Action, Pharmacokinetics, Therapeutic Uses, Adverse Effects, Contraindications, Drug Interaction, Food Interactions, Herbal Interactions, Disease Interactions</p>

Physics for Health Sciences 1	PHYCHA 1	50%	50%	5	10	<b>Science module</b> The purpose of this module is to develop the basic knowledge and understanding of physics.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Use scientific notation and the decimal system to manipulate SI-units.</li> <li>• Apply knowledge of vector theory in mechanical problems</li> <li>• Explain the concepts of work done, kinetic energy, potential energy, the law of conservation of energy, power</li> <li>• Explain heat capacity, latent heat, linear-, area-, volume-expansivities</li> <li>• Define the terms density, relative density and pressure</li> <li>• Explain the production of static electricity by friction using the electron theory</li> <li>• Describe the nature and properties of alpha, beta and gamma radiations, derive from basic principles of the law of radioactive decay</li> <li>• Explain wave-particle duality, quantum, quantized photon, quantization of energy, photo electric effect, wave nature of electrons</li> </ul> <p>Explain the production and transmission of sound and describe the different types of ultrasound scan.</p>
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Physiology 2	PHYCMY2	100%	0%	6	25	The purpose of this module is to enable the student to describe the relationship between the structure and the specialised functions of the cardiovascular, immune and respiratory systems, the digestive, excretory, reproductive systems (and related) to develop students reasoning to assess health related needs and problems in humans.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe the systems that regulate body functions</li> <li>• Understand the regulation and functioning of the systems of the body: the skin and appendages, musculoskeletal system and movement, central and peripheral nervous system and the senses, endocrine and reproductive systems, the heart and circulation, immunity and the lymphatic system, the lungs and respiratory system, metabolism and digestion, and the urinary system and urination</li> </ul> <p>Explain the roles that various systems have on the functioning and regulation of other systems for the maintenance of health and homeostasis.</p>
Phytochemistry	PHTCMB3	100%	0%	7	10	The purpose of this module is to provide students with the fundamental branch of chemistry dealing with the chemical processes associated with plant life and the chemical compounds produced by plants.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Describe in detail the molecular genetics and genomics of plant cells</li> <li>• Understand the impact of environmental and ecological change on plants</li> <li>• Name and classify plant constituents</li> <li>• Demonstrate the various techniques of</li> </ul>

							plant extraction and herbal medicine preparation <ul style="list-style-type: none"> <li>• Understand the effects of the primary and secondary metabolites of plants</li> <li>• Outline the principles of validating herbal therapeutics.</li> </ul>
Phytotherapy 1	PTTCMY 3	100%	0%	7	15	The purpose of this module is to expand the students' knowledge regarding the principles of phytotherapy, efficacy and safety of herbal medicines and their various dosage forms, as well as identify commonly used medicinal plants.	At the end of this module the student will be able to: <ul style="list-style-type: none"> <li>• Explain the principles of phytotherapy</li> <li>• Describe the various dosage forms of herbal medicines</li> <li>• Understand herb-herb and herb-drug interactions and safety</li> <li>• Demonstrate an understanding of case taking in the and the development of relevant treatment strategies</li> <li>• Discuss the indications of commonly used medicinal plants</li> </ul> Critically evaluate evidence for efficacy of herbal medicines.
Phytotherapy 2	PTTCMY 4	100%	0%	7	20	The purpose of this module is to provide the student with an in-depth understanding and systematic knowledge base of the individual herbs commonly used in a phytotherapy practice.	At the end of this module the student will be able to: <ul style="list-style-type: none"> <li>• Discuss the clinically relevant information including effects, uses, dosage, preparations, and safety of individual herbs</li> <li>• Explain the botany, pharmacology, efficacy, indications, contra-</li> </ul>

							indications, and safety of individual herbs.
Practice Management and Jurisprudence 1	PMJCMA 4	100%	0%	7	8	The purpose of this module is to confront the student with the numerous challenges and considerations specifically required in the establishment of a complementary medicine private practice, to introduce the concept of legal regulation of health professions in general as well as to present specific areas of regulation that are required to be known by the graduate when entering practice.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate knowledge of pertinent legislation and regulations</li> <li>• Conduct a practice feasibility study and business plan is conducted</li> <li>• Understanding and apply the basic principles of financial management</li> <li>• Describe principles of professional conduct are described and evaluated by means of oral and written evidence</li> <li>• Identify parameters in order to maintain patient dignity whilst acknowledging patient diversity</li> </ul> <p>Demonstrate an understanding of the legislation and regulations that pertain to the prescribing, compounding or dispensing.</p>
Research Methods in Complementary Medicine	REMCMA4	100%	0%	7	10	The purpose of this module is to provide the student with an understanding and systematic knowledge base of research methods in complementary medicine.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>• Discuss the basic concepts of research methodology</li> <li>• Identify and initiate an appropriate research project</li> <li>• Review and critique research</li> </ul>

							<ul style="list-style-type: none"> <li>Describe the processes of designing a research project and collecting data</li> <li>Understand statistical analysis and interpretation of results</li> <li>Prepare a research proposal</li> <li>Critically discuss ethical consideration in research, including plagiarism.</li> </ul>
Research Project in Complementary Medicine	REPCMB4	100%	0%	7	10	The research project is aimed at assisting the student to demonstrate sound knowledge, competences and skills gained from all modules to successfully identify a complementary medicine area of research.	<p>At the end of this module the student will be able to:</p> <p>Formulate a research report in the field of complementary medicine.</p>
Sociology of Health and Health Care	SOHCHB1	100%	0%	6	10	The purpose of this module is to enable the student to develop an understanding of the sociology of health and its application in the field of Complementary Health care in South Africa, with particular emphasis on homeopathy, phytotherapy and acupuncture.	<p>At the end of this module the student will be able to:</p> <ul style="list-style-type: none"> <li>Discuss the fundamentals of health and healthcare</li> <li>Critically differentiate between the major perspectives associated with the field of psychology</li> <li>Demonstrate an understanding of the biological processes and how they influence human behavior</li> <li>Demonstrate an understanding of awareness and the various levels experienced</li> <li>Compare the three types of learning</li> <li>Describe the processes</li> </ul>

							<p>involved in memory: coding, storage and retrieval</p> <ul style="list-style-type: none"> <li>• Explain the various types of intelligence</li> <li>• Describe motivation and the different theories of emotion</li> <li>• Understand the role of counselling in healthcare</li> <li>• Differentiate between the different theories of personality.</li> </ul>
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### POSTGRADUATE DIPLOMA IN ACUPUNCTURE (E9A01Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Acupuncture Therapeutics 1	ACT01Y1	100%	0%	5	20	The purpose of this module is to enable the student to develop a coherent and critical understanding of acupuncture therapeutics, in order to develop treatment protocols in the management of common conditions.	<p>Describe the principles of the various therapeutic acupuncture techniques with regards to treatment planning and outcome evaluation.</p> <p>Apply the various acupuncture techniques in relation to common medical conditions.</p>
Acupuncture Therapeutics 2	ACT01Y2	100%	0%	5	24	The purpose of this module is to provide the student with an in-depth understanding of the theoretical and research-based knowledge related to acupuncture in order to develop strategies and formulations to treat and manage various health conditions.	<p>Compare and contrast various acupuncture treatments sourced from research and classical texts appropriate to individual cases to improve overall treatment efficacy and prognosis.</p> <p>Identify the appropriate therapeutic acupuncture protocols as they relate to body systems and disorders.</p>
Applied Research	APRCMY 2	100%	0%	5	8	This module is aimed at assisting the student to demonstrate sound	Formulate a research report in the field of acupuncture.

						knowledge, competences and skills gained from all modules to successfully conduct a research project in the field of acupuncture.	
Clinical Acupuncture 1	CLACMY 1	100%	0%	5	15	The purpose of this module is to introduce the student to the clinical skills required to practice acupuncture i.e. developing practical skills in needle insertion and manipulation, cupping techniques and application of moxibustion.	At the end of this module the student will be able to:  Apply the appropriate hygiene and safety protocols required when administering acupuncture treatments. Demonstrate safe needling insertion and manipulation techniques. Demonstrate safe moxibustion and cupping practices.
Clinical Acupuncture 2	CLACMY 2	100%	0%	5	20	The purpose of this module is to provide the student with advanced clinical acupuncture skills related to the treatment and management of patients.	Integrate information relating to the principles and theories of acupuncture, including case taking, in a clinical setting  Formulate acupuncture treatment strategies for application in a clinical setting  Critically evaluate the outcome of each individualized treatment plan based on follow-up feedback from the patient.
Ethics and Jurisprudence	ETJCMY2	100%	0%	5	8	The purpose of this module is to provide the student with the ethical foundations required in private practice, and to expand on their knowledge pertaining to legal regulation of health professions and specifically acupuncture practice.	Demonstrate knowledge and apply principles of ethical conduct.  Discuss and acknowledge the various aspects of patient diversity.
Foundations of Acupuncture	FOACMY 1	100%	0%	5	15	The purpose of the module is to enable the student to develop an in-depth understanding of the history, philosophy and principles of	Relate the history, philosophy and principles of acupuncture Demonstrate an understanding of the efficacy and safety of the



						acupuncture practices, its efficacy and safety, and the role of evidence-based practice (EBP) in its approach to treatment.	various acupuncture treatment strategies.
Needling Techniques 1	NETCMY 1	100%	0%	5	10	The purpose of this module is to provide students with practical experience related to the various acupuncture needling techniques.	Identify meridians, their course, diagnosis, and pathology relating to each meridian.  Have an understanding of point selection in the management of common disorders.  Demonstrate the various needling techniques used in acupuncture treatments.

#### POSTGRADUATE DIPLOMA IN PHYTOTHERAPY (E9P01Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Applied Phytotherapy 1	APT01Y1	100%	0%	5	25	The purpose of this module is to provide the student with an in-depth understanding and systematic knowledge-base of the individual herbs commonly used in a phytotherapy practice.	At the end of this module the student will be able to:  Discuss the clinically relevant information including the effects, uses, dosage, and preparations of individual herbs.  Explain the botany, pharmacology, efficacy, and indications of individual herbs.  Consider the contra-indications and safety of individual herbs.
Applied Research	APRCMY 2	100%	0%	5	8	This module is aimed at assisting the student to demonstrate sound knowledge, competences and skills gained from all modules to successfully conduct	At the end of this module the student will be able to: Formulate a research report in the field of phytotherapy.

						a research project in the field of phytotherapy.	
Clinical Phytotherapy	CLPCMY 2	100%	0%	5	30	The purpose of this module is to provide the student with theoretical and research-based knowledge related to herbal medicines in order to develop strategies and formulations to treat and manage various health conditions.	At the end of this module the student will be able to:  Integrate information relating to the principles and theories of phytotherapy, case taking and prescribing.  Develop phytotherapeutic protocols related to body systems and their associated health conditions.
Ethics and Jurisprudence	ETJCMY2	100%	0%	5	8	The purpose of this module is to provide the student with the ethical foundations required in private practice, and to expand on their knowledge pertaining to legal regulation of health professions and specifically phytotherapy practice.	At the end of this module the student will be able to:  Demonstrate knowledge and apply principles of ethical conduct.  Explain the importance of the maintenance of patient dignity with reference to human rights.  Detail the legislation, regulations and guidelines that pertain to healthcare practice in South Africa.
Foundations of Phytotherapy 1	FOPCMY 1	100%	0%	5	10	The purpose of the module is to enable the student to develop an in-depth understanding of the history, philosophy and principles of phytotherapy practices, efficacy and safety of herbal medicines and their various dosage forms, and the role of evidence-based practice (EBP) in its	At the end of this module the student will be able to:  Discuss the history, philosophy and principles of phytotherapy. Have an understanding of the various constituents and dosage forms of herbal medicines, as well as the safety issues around using herbs, including

						approach to treatment.	herb-herb and herb-drug interactions. Demonstrate an understanding of case taking and the development of relevant treatment strategies.
Herbal Pharmacognosy	HPCCMY 1	100%	0%	5	10	The purpose of this module is to provide students with knowledge regarding medicinal plant identification, classification, and preparation, as well as the integration of traditional herbal knowledge with modern phytotherapy research.	At the end of this module the student will be able to:  Identify and classify common medicinal plants.  Describe the techniques used in harvesting, producing, dispensing and storing herbal medicines. Display an understanding of the relationship between traditional or empirical knowledge and evidence-based research regarding medicinal plants.
Herbal Pharmacology and Phytochemistry	HPPCMY 1	100%	0%	5	15	The purpose of this module is to provide students with the chemistry concept that relate to the chemical processes associated with plant life and the chemical compounds produced by plants, as well as to analyse and apply advanced concepts of the pharmacology of herbal medicines, particularly of the key chemical constituents.	At the end of this module the student will be able to:  Have an understanding of the impact of environmental and ecological change on plants and their constituents.  Outline the principles of validating herbal therapeutics.  Evaluate the principles of pharmacodynamics and pharmacokinetics in relation to medicinal plants, in relation to the various chemical constituents.
Herbal Pharmacy	HEPCMY 2	100%	0%	5	14	The purpose of this module is to provide the student with an in-depth understanding and practical application of the manufacturing and dispensing of herbal	At the end of this module the student will be able to:  Apply ethical, legal and therapeutic considerations in all

						medicines in a practice.	facets of dispensing medicines and therapeutic devices. Write, evaluate, interpret and prepare a prescription. Counsel and advise patients to ensure the correct use of medicine and improve health status.
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## MASTER OF HEALTH SCIENCES IN COMPLEMENTARY MEDICINE (M9CM1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Applied Homeopathic Materia Medica 2	AHM9XY1	100%	0%	9	9	The purpose of this module is to provide the student with applied and evidenced-based knowledge related to homeopathic medicines in order to develop advanced strategies and formulations to treat and manage various health conditions.	At the end of this module the student will be able to: •Demonstrate competence in consulting, diagnosing, treating, and communicating holistic advice to, and managing patients in the field of homeopathy •Function as primary contact practitioners, according to the Scope of Practice as a Homoeopath. •Integrate past knowledge in this field for the management of patients •Prepare therapeutic protocols for various systems or conditions.
Applied Phytotherapy 2	APT9XY1	100%	0%	9	9	The purpose of this module is to provide the student with applied and evidenced based knowledge related to herbal medicines in order to develop strategies and formulations to treat and manage various health conditions.	At the end of this module the student will be able to: •Develop phytotherapeutic protocols related to body systems and their associated health conditions •Formulate herbal medicine treatment strategies and apply to case studies in the clinic setting, under supervision.

Clinical Practice 2	CPR9XY1	100%	0%	9	9	The purpose of this module is to provide the student with the necessary competencies to assess an extensive range of health problems presented in clinical practice and use a comprehensive range of solutions for their recognition, investigation, diagnosis, treatment and management.	At the end of this module the student will be able to: •Approach various real life medical cases with a view to arriving at a process for diagnosis and further management of the patient •Select the most appropriate special investigation or examination that would aid in the diagnosis of the patient •Work together as part of a diagnostic and clinical management team •Integrate theoretical knowledge with the real time, supervised treatment of patients in a range of supervised clinical scenarios •Define Evidence-based medicine (EBM) •Explain the relevance of EBM to private practice and the practice of medicine generally •Discuss the impact of such principles on medicine and the operations of the health professional, particularly when related to Complementary Medicine (CM) •Evaluate the quality of medical evidence to enable decision making.
Homeopathic Materia Medica 3	HMM9XY1	100%	0%	9	9	The purpose of this module is to provide the student with an advanced understanding and expanded knowledge base of the Materia Medica remedies used in a homeopathic practice.	At the end of this module the student will be able to: •Choose appropriate prescription methodologies in a wide range of case settings •Integrate the remedies in the form of families or kingdoms •Identify key clinical and characteristic

							indications for remedies •Discuss and compare remedy indications
Homeopathy Internship	HPI9XB2 HPI9XA2	100% 100%	0% 0%	9 9	0 0	The purpose of the internship module is to enhance professional skills of homeopathic healthcare and patient management within the scope of practice, preparing students for the world of work.	On completion of the homeopathic internship module the student will: •Refine their diagnostic skills •Achieve advanced case taking and relevant prescriptions skills •Have exposure to the full range of various therapeutics provided in the scope of practice •Become familiar with general private practice establishment including (but not limited to): - -Front office -Dispensary (ordering, storage, creating, accounts with various suppliers, how to vet products) -Banking options -Stationary -Medical aid reimbursements (relevant coding) -Contracts for leasing -Registering with laboratories and radiological services -Legal requirements as prescribed by the Act, the Regulations, and other relevant laws, including but not limited to Consumer Protection Act 2008.
Phytotherapy 3	PTT9XY1	100%	0%	9	9	The purpose of this module is to provide the student with an advanced understanding and expanded knowledge base of the individual herbs used in a phytotherapy practice.	At the end of this module the student will be able to: •Discuss the clinically relevant information including effects, uses, dosage, preparations, and safety of individual herbs •Explain the botany, pharmacology, efficacy, indications, contra-indications,

							and safety of individual herbs.
Practice Management and Jurisprudence	PEJ9XA1	50%	50%	9	16	The purpose of this module is to provide the student with the advanced skills required in the establishment of a homeopathic/phytotherapy private practice, and to expand on their knowledge pertaining to legal regulation of health professions and specifically homeopathic/phytotherapy practice.	At the end of this module the student will be able to: <ul style="list-style-type: none"> <li>•Demonstrate knowledge and apply principles of ethical conduct</li> <li>•Demonstrate appropriate responses to the patient's needs and requests in accordance with the ethical code of practice</li> <li>•Provide written evidence of knowledge of pertinent legislation and regulations</li> <li>•Discuss and acknowledge the various aspects of patient diversity</li> <li>•Explain the importance of the maintenance of patient dignity with reference to human rights</li> <li>•Detail the legislation, regulations and guidelines that pertain to healthcare practice in South Africa.</li> </ul>
Research Project	REP9XY1	100%	0%	9	9	The purpose of this module is for the student to demonstrate sound knowledge, competences, and skills gained from all modules to successfully identify, prepare and complete a capstone research project in the field of complementary medicine.	At the end of this module the student will be able to: <ul style="list-style-type: none"> <li>•Demonstrate the relevance of different research methodologies as they would be relevant to the field of complementary medicine research.</li> <li>•Interpret and critique of medical research</li> <li>•Formulate a relevant research question; develop a capstone proposal; collect data; control of bias; analysing, confounding, and interpretation of results.</li> <li>•Conduct the proposed research investigation and</li> </ul>

							formulate a capstone project.
Research Project	REP9XY2	100%	0%	9	9	The purpose of this module is for the student to demonstrate sound knowledge, competences, and skills gained from all modules to successfully identify, prepare and complete a capstone research project in the field of complementary medicine.	At the end of this module the student will be able to: <ul style="list-style-type: none"> <li>•Demonstrate the relevance of different research methodologies as they would be relevant to the field of complementary medicine research.</li> <li>•Interpret and critique of medical research</li> <li>•Formulate a relevant research question; develop a capstone proposal; collect data; control of bias; analysing, confounding, and interpretation of results.</li> <li>•Conduct the proposed research investigation and formulate a capstone project.</li> </ul>



**HIGHER CERTIFICATE IN EMERGENCY MEDICAL CARE (F9E01Q)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
Anatomy 1	ANATCY1	100%	0%	5	12	The Anatomy I Module deals mainly with the structure and organisation of the human body. In this module the student will be introduced to medical terminology used when discussing and / or describing the human body. The learning outcomes of this subject become important when students are required to perform clinical procedures on patients. Such procedures cannot be safely and adequately performed without a sound understanding of the relevant anatomical structures	<ol style="list-style-type: none"> <li>1. Classify, describe and locate the four types of basic tissues and related structures of the human body.</li> <li>2. Classify, identify, explain and locate the various components of the musculoskeletal system and their related structures.</li> <li>3. Demonstrate and explain different movements at particular joints related to the skeleton.</li> <li>4. Identify, locate and explain the different parts of the skin and its function</li> <li>5. Define, describe and draw various components of the central and peripheral nervous system</li> <li>6. Describe, identify and locate components of the endocrine system and its interconnections</li> <li>7. Describe, identify and differentiate various components of the cardiovascular system</li> <li>8. Describe and identify different components of the digestive system</li> </ol>

							<p>9. Describe and list all the components of the respiratory system.</p> <p>10. Describe and list all the components of the urogenital system.</p> <p>11. Identify and palpate key skeletal and soft tissue landmarks of the human body.</p>
Basic Sciences: Chemistry	CHBCEB1	50	50	5	6	<p>The purpose of this module is to develop students' understanding of the basic principles of chemistry to serve as a foundation for the students' further development in their careers in the health sciences.</p>	<p>1. List the different classes of elements in the periodic table and describe how they are likely to react.</p> <p>2. Perform basic chemical calculations using the formulas of compounds and balanced equations.</p> <p>3. Predict how gases behave under certain conditions.</p> <p>4. Classify different types of solutions, explain their properties and calculate their acidity.</p> <p>5. Identify the physical properties of the most common organic and inorganic compounds and predict how they will react.</p> <p>6. Explain the different types of radiation; know their medical applications and the dangers associated with exposure to each type.</p>
Basic Sciences: Physics 1A	PHYCEA1	50	50	5	6	<p>A grounding in physics is very important for the student. The physics learning outcomes are applied in a number of other areas in the qualification and also serve as a foundation</p>	<p>1. Describe what matter is and the different states of matter.</p> <p>2. Use scientific notation and the</p>

						for the students' further development in their careers in the health sciences	<p>decimal system to manipulate SI-units.</p> <p>3. Formulate and explain the laws and definitions in kinetics and dynamics and apply these to solving problems in those fields.</p> <p>4. State the laws and define the physical quantities used in gasses and hydrostatics and apply these to solving problems in stationary fluids.</p> <p>5. Explain the processes whereby energy and heat may be transferred.</p>
Clinical Practice 1	CLPECY1	100%	0%	5	36	This module aims to provide the student with the platform to meaningfully interact with patients and improve clinical performance through Clinical Learning and also to reflect on the learning that has taken place within the clinical learning context through completing case studies and reflective reports.	<p>1. Demonstrate competence at meeting the desired exit level learning outcomes relating to the holistic management of an emergency call at the expected level of care, at an emergency care assistant level in the authentic clinical environments.</p> <p>2. Demonstrate application of knowledge and skills of the following focus areas:</p> <p>a. Emergency medical service operational systems</p> <p>b. Professional practice</p> <p>c. Emergency medical care</p> <p>d. Documentation and record keeping</p> <p>e.</p>

							<p>Transportation of the ill/injured patient</p> <p>3. Demonstrate the ability to communicate effectively with the patient and the crew in the emergency care environment.</p> <p>4. Demonstrate an ability to perform the required clinical skills and procedures relevant to the emergency care environment within the emergency care assistant scope of practice.</p> <p>5. Compose, appraise and present patient case studies.</p> <p>6. Demonstrate an ability to assess, diagnose and institute appropriate management strategies for critically ill and injured patients.</p> <p>7. Demonstrate the knowledge and ability on how to utilize the emergency medical equipment available to emergency care practitioners within the emergency care assistant scope of practice.</p> <p>8. Demonstrate team and individual ability within an emergency service's daily operational matters, which will include the checking of the emergency vehicle and emergency medical care equipment.</p>
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Emergency Medical Care 1 Practical	EMCCPY1	100%	0%	5	24	<p>The Emergency Medical Care I Practical Module deals with practical application of theoretical concepts and principles that underpin emergency care, in the acute out-of-hospital settings. On completion, students should start to integrate their understanding of anatomy, physiology, pathology and professional practice to patient care at a level that is consistent with the level of an Emergency Care Assistant. his module also aims to equip students with the ability to interact with patients, make accurate diagnoses and sound clinical judgments that informs and validates decisions regarding patient care and treatment, to the level of an Emergency Care Assistant.</p>	<p>1. Demonstrate how to perform a variety of medical procedures, according to the approved list of capabilities of an ECA by performing Objective Structured Clinical Examinations (OSCEs) and Clinical Vignettes.</p> <p>2. Demonstrate effective patient communication and apply the principles of medical ethics and professional behaviour when managing simulated patients.</p> <p>3 Demonstrate, by performing patient simulations, the ability to assess patients and interact with patients confidently and professionally in order to accurately diagnose simple processes, as well as demonstrate the ability to make sound clinical judgments.</p> <p>4. Demonstrate , by performing patient simulations and clinical vignettes, the ability to provide appropriate care to patients suffering from a variety of injuries and illnesses commonly found in the pre-hospital setting according to the expected level of care from an Emergency Care Assistant.</p>
Emergency Medical Care 1 Theory	EMCCTY1	100%	0%	5	112	<p>The purpose of Emergency Medical Care I Theory Module is to develop the student's knowledge and understanding of foundational theoretical</p>	<p>1. Discuss effective communication and apply the principles of medical ethics, professional</p>

						<p>concepts and principles that underpin the provision of medical care in the acute out-of-hospital settings. On completion of the module, students should be able to answer questions regarding the principles of pre-hospital emergency care, to the complexity expected from graduate Emergency Care Assistants. Students will also start to integrate principles of anatomy, physiology, and professional practice to patient care.</p>	<p>behaviour and the legal framework to the context within which emergency care providers operate in scenario based written knowledge tasks.</p> <p>2. Discuss how to provide emergency medical care to patients suffering from illnesses and injuries commonly found in the South African pre-hospital setting, by answering scenario-based questions in integrated assessments to the level and scope of a graduate ECA.</p> <p>3. Demonstrate , by answering scenario-based questions in integrated assessments, the ability to make sound clinical judgments in simple cases using knowledge and understanding of human and basic sciences underpinning emergency medical care, to the level and scope of a graduate ECA.</p>
End User Computing	ENUC011	50%	50%	5	6	<p>The purpose of the End User Computing Module is to provide the student with the basic skills necessary to operate a personal computer, prepare, edit, print documents, send and receive emails as well as utilise the internet as a source of information</p>	<p>1. Explain concepts and terms associated with Information Technology (IT).</p> <p>2. Demonstrate the ability in using common functions of a PC and its operating system.</p> <p>3. Demonstrate the ability to use a word processing application on a computer.</p>

							<p>4. Demonstrate the ability to use a presentation application on a computer.</p> <p>5. Explain concepts and terms associated with using the Internet.</p> <p>6. Demonstrate the ability to use e-mail software on a computer.</p> <p>7. Demonstrate the ability to use a spreadsheet application on a computer.</p> <p>8. Demonstrate the ability to use a database on a computer.</p>
Foundations of Professional Practice	FOPPCA1	100%	0%	5	10	<p>The purpose of the Foundations of Professional Practice Module is to introduce the student to the structure and functioning of the broader health sector within the country, as well as how emergency services operate and function, to the student. This module also assists the student to understand their role and function within the context of the legal framework within which the ECA operates. The module delineates issues such as expected conduct, professional behaviour, and ethics. This module also covers the correct usage, inspection and, where applicable, the maintenance of vehicles and medical</p>	<p>1. Discuss the structure and function of Emergency Medical Service (EMS) systems in South Africa and explain how the EMS relates to the broader health care structures within the country.</p> <p>2. Discuss a variety of topics related to medical ethics, professional behaviour and the legal framework within the Emergency Medical Services context.</p> <p>3. Explain the various types of emergency service vehicles and, where applicable, demonstrate the correct operating procedures that should be followed</p>



						equipment used in the emergency care environment.	<p>when using such vehicles.</p> <p>4. Discuss the importance of health and safety in and around the workplace and to identify the potential hazards that you may be faced with during the course of your duties as an emergency care assistant.</p> <p>5. Demonstrate the ability to professionally communicate and using various communication systems that may be used in the emergency services.</p> <p>6. Discuss useful generic skills that are necessary if you are to provide a professional service within a specific organizational framework (policies and procedures) as well as a legal framework.</p>
Mental Health and Wellness	MHAECB1	100%	0%	5	6	The purpose of the Mental Health and Wellness Module is to introduce the student to mental health issues such as stress and burnout including the ways in which the emergency care assistant may manage their own mental wellbeing and that of their colleagues within the potentially stressful emergency care environment	<p>1. Explain the concept of mental health and link between mental health and physical wellbeing.</p> <p>2. Explain and identify depression, stress and stress management.</p> <p>3. Explain methods of conflict management.</p> <p>4. Explain the concepts behind crisis intervention.</p> <p>5. Describe human reactions to and ways of</p>

							<p>managing death and dying.</p> <p>6. Discuss substance abuse and the role of environment in mental health issues.</p> <p>7. Explain how to identify and manage signs and symptoms of stress, burnout and depression in oneself and others</p>
Physical Preparedness 1	PHPRCY1	100%	0%	5	2	<p>The purpose of the physical preparedness module is to provide students with the opportunity to obtain an acceptable level of physical fitness and swimming proficiency thus supporting them safely engaging in emergency care learning experiences and related environments.</p>	<p>1. Explain the important characteristics and components of a training programme</p> <p>2. Define the components of fitness.</p> <p>3. Describe the effect of attitude and psychological approach to exercise on performance</p> <p>4. Demonstrate the baseline physical fitness and swimming proficiency.</p>
Physiology 1	PHYSEY1	100%	0%	5	12	<p>The module will enable students to gain the relevant physiological background applicable to Emergency Medical Care in the following topics: Physiological terminology, Chemistry for Physiology, Cell, Endocrine, Reproductive, Nervous, Cardiovascular, Respiratory, Urinary and Digestive systems, as well as Special senses</p>	<p>1. Describe the basic applicable principals of chemistry and cellular activities.</p> <p>2. Describe the structure and the functions of the integumentary system and its associated appendages.</p> <p>3. Describe the physiological mechanisms involved in movement.</p> <p>4. Explain the physiological mechanisms of communication, integration and</p>

							<p>control of the nervous system.</p> <p>5. Relate the structures and functions of the endocrine glands and reproductive organs to their functions.</p> <p>6. Describe the anatomy and physiology of the circulatory system.</p> <p>7. Describe the physiology of the respiratory system.</p> <p>8. Relate the structure of the organs and accessory glands of the digestive system to their functions.</p> <p>9. Describe the physiology of the urinary system.</p>
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#### DIPLOMA IN EMERGENCY MEDICAL CARE (D9E01Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Anatomy 1	ANAT011	100%	0%	5	12	The module will enable students to gain the relevant anatomical background applicable to Emergency Medical Care in the following topics: anatomical terminology, Musculo-skeletal anatomy, Histology, Endocrine, Reproductive, Nervous, Cardiovascular, Respiratory, Urinary and Digestive systems, as well as Special senses.	<ol style="list-style-type: none"> <li>1. Correctly use and apply anatomical terminology.</li> <li>2. Classify, describe and locate the four types of basic tissues and related structures of the human body.</li> <li>3. Classify, identify, explain and locate the various components of the musculoskeletal system and their related structures.</li> <li>4. Demonstrate and explain different movements at particular joints related to the skeleton.</li> <li>5. Identify, locate and explain the</li> </ol>

						<p>different parts of the skin and its function.</p> <p>6. Define, describe and draw various components of the central and peripheral nervous system.</p> <p>7. Describe, identify and locate components of the endocrine system and its interconnections.</p> <p>8. Describe, identify and differentiate various components of the cardiovascular system.</p> <p>9. Describe and identify different components of the digestive system.</p> <p>10. . Describe and list all the components of the respiratory system.</p> <p>11. Describe and list all the components of the urogenital system.</p> <p>12. Identify and palpate key skeletal and soft tissue landmarks of the human body</p>
Basic Sciences: Chemistry	CET1DB1	50%	50%	5	6	<p>The purpose of this module is to develop students' understanding of the basic principles of chemistry to serve as a foundation for the students' further development in their careers in the health sciences.</p> <p>1. Describe matter using macroscopic and microscopic properties.</p> <p>2. List the different classes of elements in the periodic table and describe how they are likely to react.</p> <p>3. Explain the difference between atoms and elements, molecules and compounds.</p> <p>4. Perform basic chemical calculations using the formulas of compounds and balanced equations.</p> <p>5. Predict how gases behave under certain conditions.</p>

							6. Classify different types of solutions, explain their properties and calculate their acidity. 7. Identify the physical properties of the most common organic and inorganic compounds and predict how they will react. 8. Explain the different types of radiation; know their medical applications and the dangers associated with exposure to each type.
Basic Sciences: Physics 1A	PHY1DA1	50%	50%	5	6	A grounding in physics is very important for the student. The physics learning outcomes are applied in a number of other areas in the qualification and also serve as a foundation for the Students' further development in their careers in the health sciences	1. Use scientific notation and the decimal system to manipulate SI-units. 2. Apply knowledge of vector theory in mechanical problems. 3. Formulate and explain the laws and definitions in kinetics and dynamics and apply these to solving problems in those fields. 4. State the laws and define the physical quantities used in hydrostatics and apply these to solving problems in stationary fluids. 5. Explain the processes whereby heat is transferred
Clinical Practice 1	CLPR011	100%	0%	5	30	This module aims to provide the student with the platform to meaningfully interact with patients and improve clinical performance through Clinical Learning and also to reflect on the learning that has taken place within the clinical learning context through completing case studies	1. Demonstrate effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which emergency care practitioners operate in the real work environment

						and reflective reports.	<p>during Clinical Learning.</p> <p>2. Provide emergency medical care to patients suffering from illnesses and injuries commonly found in the South African pre-hospital setting by answering scenario-based questions in the real world setting during Clinical Learning.</p> <p>3. Demonstrate, by treating real patients, the ability to make sound clinical judgments in simple cases using knowledge and understanding of human and basic sciences underpinning emergency medical care.</p> <p>4. Demonstrate the ability to be sensitive to as well as respect cultural diversity in the country and apply this ability when providing care to patients encountered during clinical learning.</p> <p>5. Demonstrate, by completing case studies, the ability to examine a clinical example or phenomenon encountered during Clinical Learning in detail.</p> <p>6. Demonstrate, by completing reflective reports, the ability to meaningfully reflect on the learning that has taken place within the WIL environment.</p> <p>7. Accurately record information regarding the assessment, history taking, decision making</p>
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							and care provided to the patient.
Clinical Practice 2	CLPR022	100%	0%	6	36	<p>This module aims to provide the student with the platform to meaningfully interact with patients and improve clinical performance through Clinical Learning and also to reflect on the learning that has taken place within the clinical learning context through completing case studies and reflective reports.</p>	<ol style="list-style-type: none"> <li>1. Demonstrate effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which emergency care practitioners operate in the real work environment during Clinical Learning.</li> <li>2. Provide emergency medical care to patients suffering from illnesses and injuries commonly found in the South African pre-hospital setting by answering scenario-based questions in the real world setting during Clinical Learning.</li> <li>3. Demonstrate, by treating real patients, the ability to make sound clinical judgments in simple cases using knowledge and understanding of human and basic sciences underpinning emergency medical care.</li> <li>4. Demonstrate the ability to be sensitive to as well as respect cultural diversity in the country and apply this ability when providing care to patients encountered during clinical learning.</li> <li>5. Demonstrate, by completing case studies, the ability to examine a clinical example or phenomenon encountered during Clinical Learning in detail.</li> </ol>

							6. Demonstrate, by completing reflective reports, the ability to meaningfully reflect on the learning that has taken place within the WIL environment. 7. Accurately record information regarding the assessment, history taking, decision making and care provided to the patient.
Emergency Medical Care 1 Practical	EMCPR1 1	100%	0%	5	12	The Emergency Medical Care I Practical Module deals with practical application of theoretical knowledge and understanding of basic life support practice in the acute pre-hospital and casualty settings. On completion, students should start to integrate their understanding of anatomy, physiology, pathology and professional practice to patient care at a first-year level. This module also aims to equip students with the ability to interact with patients, make accurate diagnoses and sound clinical judgments that informs and validates decisions regarding patient care and treatment.	1. Demonstrate how to perform a variety of basic medical procedures on patients suffering from illnesses and injuries commonly found in the South African pre-hospital setting by performing Objective Structured Clinical Examinations (OSCEs) and Clinical Vignettes. 2. Demonstrate effective patient communication and apply the principles of medical ethics and professional behaviour when managing simulated patients. 3. Demonstrate, by performing patient simulations, the ability to confidently and professionally interact with patients and assess patients in order to accurately diagnose simple processes, as well as demonstrate the ability to make sound clinical judgments. 4. Demonstrate, by performing patient simulations and clinical vignettes, the ability to



							provide appropriate care to patients suffering from a variety of injuries and illnesses commonly found in the pre-hospital setting according to the expected level of care of a first-year student paramedic.
Emergency Medical Care 1 Theory	EMCTH1 1	100%	0%	5	24	The Emergency Medical Care I Theory Module deals with foundational theoretical knowledge and principles that underpin the provision of medical care in the acute pre-hospital and emergency department settings. On completion of the module, students should be able to answer reasonably complex questions regarding the principles of pre-hospital emergency care. Students will also start to integrate principles of anatomy, physiology, and professional practice to patient care.	<ol style="list-style-type: none"> <li>1. Discuss effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which emergency care providers operate in scenario based written knowledge tasks.</li> <li>2. Discuss how to provide emergency medical care to patients suffering from illnesses and injuries commonly found in the South African pre-hospital setting, by answering scenario-based questions in integrated assessments.</li> <li>3. Demonstrate, by answering scenario-based questions in integrated assessments, the ability to make sound clinical judgments in simple cases using knowledge and understanding of human and basic sciences underpinning emergency medical care.</li> </ol>
Emergency Medical Care 2 Practical	EMCPR2 2	100%	0%	6	12	The Emergency Medical Care II Practical Module deals with practical application of theoretical knowledge and understanding of	<ol style="list-style-type: none"> <li>1. Demonstrate how to perform a variety of medical procedures on patients suffering from illnesses and injuries commonly</li> </ol>

						<p>advanced life support practice in the acute pre-hospital and casualty settings. On completion, students should be able to integrate their understanding of anatomy, physiology, pathology and professional practice to patient care on an advanced life support level. This module also aims to equip students with the ability to confidently and professionally interact with patients, make accurate diagnoses and sound clinical judgments that informs and validates decisions regarding patient care and treatment.</p>	<p>found in the South African pre-hospital setting by performing Objective Structured Clinical Examinations (OSCEs) and Clinical Vignettes.</p> <p>2. Demonstrate effective patient communication and apply the principles of medical ethics and professional behaviour when managing simulated patients.</p> <p>3. Demonstrate, by performing patient simulations, the ability to confidently and professionally interact with patients and assess patients in order to make accurate diagnoses and sound clinical judgments.</p> <p>4. Demonstrate, by performing patient simulations and clinical vignettes, the ability to provide appropriate care to patients suffering from a variety of injuries and illnesses commonly found in the pre-hospital setting according to the expected level of care of a graduate paramedic.</p>
Emergency Medical Care 2 Theory	EMCTH2 2	100%	0%	6	36	<p>The Emergency Medical Care II Theory Module deals with theoretical knowledge and principles that underpin the provision of medical care in the acute pre-hospital and emergency department settings. On completion students should be able to answer complex questions regarding the principles of pre-hospital emergency care. Students should also demonstrate the ability to integrate principles of anatomy, physiology, and foundations of professional practice to</p>	<p>1. Discuss effective communication and apply the principles of medical ethics, professional behavior and the legal framework to the context within which emergency care practitioners operate in scenario based written knowledge tasks.</p> <p>2. Demonstrate, by answering scenario-based questions in integrated assessments, the ability to make sound clinical judgments in simple cases using</p>

						patient care.	knowledge and understanding of human and basic sciences underpinning emergency medical care. 3. Discuss, by answering simple, as well as complex questions during written knowledge tasks, how to provide emergency medical care to patients suffering from illnesses and injuries commonly found in the South African pre-hospital setting to the level of a graduate paramedic.
End User Computing	ENUC011	100%	0%	5	6	The End User Computing Module provides the student with the basic skills necessary to operate a personal computer, prepare, edit, print documents, send and receive emails as well as utilise the internet as a source of information.	1. Explain concepts and terms associated with Information Technology (IT). 2. Demonstrate the ability in using common functions of a PC and its operating system. 3. Demonstrate the ability to use a word processing application on a computer. 4. Demonstrate the ability to use a presentation application on a computer. 5. Explain concepts and terms associated with using the Internet. 6. Demonstrate the ability to use e-mail software on a computer. 7. Demonstrate the ability to use a spreadsheet application on a computer. 8. Demonstrate the ability to use a database on a computer.
Fire Search & Rescue	FSAR022	100%	0%	6	12	The Fire Search and Rescue module provides the student with the necessary knowledge and skills to work as part of a team at incidents	1. Comprehensively explain and discuss principles and theories that inform Fire Dynamics and Fire Behaviour

						where oxygen deprived environments, smoke filled compartments or heat-filled compartments are present, and there are victims that require search and rescue.	<p>2.Explain the role and function of Personal Protective Equipment used for Fire Search and Rescue, as well as the selection, inspection and use thereof.</p> <p>3. Discuss the various fire Search and Rescue Techniques on the Fireground</p> <p>4. Discuss the role and function of Fire Fighting Equipment, and demonstrate how to select, inspect and correct use of the equipment.</p>
Foundations of Professional Practice	FOPP011	100%	0%	5	10	<p>The Foundations of Professional Practice Module introduces the structure and functioning of the broader health sector within the country, as well as how emergency services operate and function, to the student. This module also assists the student to understand their role and function within the context of the legal framework within which the paramedic operates. The module delineates issues such as expected conduct, professional behaviour and ethics. This module also covers the correct usage, inspection and, where applicable, the maintenance of vehicles and medical equipment used in the emergency care environment.</p>	<p>1. Discuss the structure and function of Emergency Medical Service (EMS) systems in South Africa and explain how the EMS relates to the broader health care structures within the country.</p> <p>2. Discuss a variety of topics related to medical ethics, professional behaviour and the legal framework within the Emergency Medical Services context.</p> <p>3. Explain the various types of emergency service vehicles and, where applicable, demonstrate the correct operating procedures that should be followed when using such vehicles.</p> <p>4. Discuss the importance of health and safety in and around the workplace and to identify the potential hazards that you may be faced with during the course of your duties as an emergency care practitioner.</p> <p>5. Demonstrate the ability to professionally communicate and</p>

							<p>discuss the various types of communication systems that may be used in the emergency services.</p> <p>6. Discuss useful generic skills that are necessary if you are to provide a professional service within a specific organizational framework (policies and procedures) as well as a legal framework.</p> <p>7. Demonstrate the ability to inspect, select, use, and maintain the various types of medical equipment in the emergency care and transportation environment.</p>
High Angle 1	HIAN022	100%	0%	6	12	<p>The High Angle I module provides the student with the necessary knowledge and skills that will act as a foundation to work safely at incidents involving victims that need to be accessed at height.</p>	<p>1. Discuss the role and function of equipment used during rope rescue, and demonstrate how to select, inspect and correct use of the equipment.</p> <p>2. Demonstrate how to tie and construct the various knots used in rope rescue.</p> <p>3. Demonstrate how to construct anchor points, as well as how to rig simply rope rescue systems.</p> <p>4. Discuss belaying principles and demonstrate various belaying techniques.</p> <p>5. Discuss abseiling principles and demonstrate various abseiling techniques.</p> <p>6. Discuss ascending principles and demonstrate various ascending techniques.</p> <p>7. Discuss Self-Rescue concepts within the discipline of rope rescue.</p>
Mental Health and Wellness	MHAW011	100%	0%	5	6	<p>The Mental Health and Wellness Module covers issues of stress and burnout including the</p>	<p>1. Explain the concept of mental health and link between mental health and physical</p>

						ways in which the emergency care provider may manage their own mental wellbeing and that of their colleagues within the potentially stressful emergency care environment.	wellbeing. 2. Explain and identify depression, stress and stress management. 3. Explain methods of conflict management. 4. Explain the concepts behind crisis intervention. 5. Describe human reactions to and ways of managing death and dying. 6. Discuss substance abuse and the role of environment in mental health issues. 7. Explain how to identify and manage signs and symptoms or stress, burnout and depression in oneself and others.
Motor Vehicle Rescue	MOVR022	100%	0%	6	10	The Motor Vehicle Rescue module provides the student with the necessary knowledge, skills and techniques to extricate entrapped victims involved in land-based vehicle collisions. The module will focus on the fundamentals of vehicle anatomy and new car technology, collision trauma and the management of a vehicle accident. The techniques and equipment used to extricate patients will be dealt with in detail during this module.	1. Discuss various aspects that influence provider, partner and scene safety during Vehicle Rescue operations. 2. Discuss vehicle anatomy and new car technology. 3. Explain the role, function, selection, use and maintenance of vehicle rescue tools and equipment. 4. Discuss the phased approach to vehicle rescue 5. Demonstrate the ability to function as part of a team in order to extricate a victim that had been entrapped as a result of a land-based vehicle collision safely and efficiently.
Physical Preparedness 1 and 2	PHPR011 PHPR022	100% 100%	0% 0%	5 6	2 2	It is important for a graduate paramedic to be physically capable of performing the daily tasks required of them. These tasks are by nature physical and require the emergency care provider to possess a baseline level of strength and fitness. The purpose of the physical	1. Explain the important characteristics and components of a training programme 2. Define the components of fitness. 3. Describe the effect of attitude and psychological approach to exercise on performance

						preparedness module to provide students with the opportunity to obtain an acceptable level of physical fitness and swimming proficiency thus supporting them safely engaging in emergency care learning experiences and related environments.	4. Demonstrate the baseline physical fitness and swimming proficiency.
Physiology 1	PHYS011	100%	0%	5	12	The module will enable students to gain the relevant physiological background applicable to Emergency Medical Care in the following topics: Physiological terminology, Chemistry for Physiology, Cell, Endocrine, Reproductive, Nervous, Cardiovascular, Respiratory, Urinary and Digestive systems, as well as Special senses.	<ol style="list-style-type: none"> <li>1. Describe the basic applicable principals of chemistry and cellular activities.</li> <li>2. Describe the structure and the functions of the integumentary system and its associated appendages.</li> <li>3. Describe the physiological mechanisms involved in movement.</li> <li>4. Explain the physiological mechanisms of communication, integration and control of the nervous system.</li> <li>5. Relate the structures and functions of the endocrine glands and reproductive organs to their functions.</li> <li>6. Describe the anatomy and physiology of the circulatory system.</li> <li>7. Describe the physiology of the respiratory system.</li> <li>8. Relate the structure of the organs and accessory glands of the digestive system to their functions.</li> <li>9. Describe the physiology of the urinary system.</li> </ol>
Primary Health Care	PRHC022	100%	0%	6	6	The purpose of Primary Health Care (PHC) is to introduce the future Emergency Care Provider to the concept of holistic PHC as enshrined within the National Department of Health (NDoH)	<ol style="list-style-type: none"> <li>1. Discuss the historical background, context, declarations, foundation and principles that underpin Primary Health Care.</li> <li>2. Define concepts and discuss various</li> </ol>

						<p>framework. Primary Health Care is concerned with the health of individuals as well as the greater community amongst which these paramedics may reside. Primary Health Care addresses all aspects of health within the community. These aspects include healthcare education, health promotion, access to healthcare as well as related issues such as community welfare, psychological wellbeing as well as the prevention of disease. This subject will begin by introducing the rationale behind the PHC concept and walk the student through various modules detailing PHC implementation. This subject is vitally important as it will allow students to appropriately identify and integrate theoretical concepts when involved in Work-Integrated Learning. Much of the qualified paramedics work will take place in the community where these PHC concepts are of utmost importance.</p>	<p>concepts related to understanding health and illness.</p> <ol style="list-style-type: none"> <li>3. Provide various definitions, discussions and explanations related to topics on prevention of ill-health.</li> <li>4. Provide various definitions, discussions and explanations related to topics on communicable and non-communicable diseases</li> <li>5. Provide various definitions, discussions and explanations related to topics on planning and health information systems</li> <li>6. Discuss health, human rights and ethics within the context of Primary Health Care</li> <li>7. Discuss the various factors that influence the future of primary health care</li> <li>8. Provide various definitions, discussions and explanations related to topics on community awareness and Primary Health Care education.</li> </ol>
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### **ADVANCED CERTIFICATE IN MEDICAL RESCUE (C9AMRQ)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
Foundations of Rescue Practices	FRP01Y1	100%	0%	6	10	The Foundations of Rescue Practices module focuses on the status, structure, and function of technical Rescue in South Africa, as well as the applicable legislation, regulation and standards in technical rescue. Also included in this module are	<ol style="list-style-type: none"> <li>1. Demonstrate an understanding of the origin of rescue.</li> <li>2. Demonstrate the ability to identify and elaborate on the terminology associated with the various rescue</li> </ol>



					<p>topics such as the different phases of rescue, logistics in rescue and incident management systems. Important rescue team principles and the expected conduct, professional behaviour and ethics are also covered.</p>	<p>disciplines.</p> <ol style="list-style-type: none"> <li>3. Demonstrate an understanding of the legislative framework and common legal terms that may be applicable in the rescue context.</li> <li>4. Demonstrate an understanding of the sections of legislation that mandate and guide rescue services in South Africa.</li> <li>5. Demonstrate an understanding of the characteristics of a professional person.</li> <li>6. Demonstrate an understanding of the importance of professionalization of rescue in South Africa.</li> <li>7. Demonstrate an understanding of terms often associated with teamwork and leadership.</li> <li>8. Demonstrate an understanding of the characteristics that may either contribute or hinder effective teamwork and leadership in the rescue context.</li> <li>9. Demonstrate an understanding of the generic roles and responsibilities of a rescue team.</li> <li>10. Demonstrate an understanding of the cyclical nature of the phases and related activities involved in the management of rescue incidents.</li> </ol>
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							<p>11. Demonstrate an understanding of the different incident management systems in South Africa and how the diversity of these systems may impact the management of incidents.</p> <p>12. Demonstrate an understanding of the terminology, principles, features, and framework of the Incident Command System.</p>
Rescue Technologies and Equipment	RTE01Y1	100%	0%	6	15	The <i>Rescue Technologies and Equipment</i> module focuses identification, inspection, preparation, operation, maintenance and storage of equipment, vehicles and other resources required to provide safe and effective rescue services.	<p>1. Demonstrate an understanding of some of the considerations when identifying and selecting rescue equipment.</p> <p>2. Demonstrate the ability to identify applicable legislation, standards, certifications, specifications and performance criteria of rescue equipment.</p> <p>3. Demonstrate a basic understanding of factors that should be considered when selecting personal protective equipment.</p> <p>4. Demonstrate an understanding of the different types of inspections and their importance when inspecting rescue equipment.</p> <p>5. Demonstrate</p>

							<p>the ability to carry out an inspection of rescue equipment using the manufacturer's recommendations.</p> <p>6. Demonstrate an understanding of the simple mechanics, functioning and operation of an internal combustion engine</p> <p>7. Demonstrate an understanding of the simple mechanics, functioning and operation of a hydraulic system.</p> <p>8. Demonstrate an understanding of the simple mechanics, functioning and operation of a pneumatic system.</p> <p>9. Demonstrate an understanding of the principles, components, supply and operation of simple temporary electrical supply systems.</p>
Communications in the Rescue Environment	CRE01Y1	100%	0%	6	5	<p>The <i>Communications in the Rescue Environment</i> module provides the student with the skills and knowledge to identify, establish and operate wireless, remote, hard-wired, direct, or two-way Communication systems used for.</p>	<p>1. Describe the fundamental principles and concepts that underpin human communication.</p> <p>2. Identify and describe different types of communication and differences of approach.</p> <p>3. Demonstrate the knowledge and insights required to make use of a radio communication system in medical rescue</p>

							<p>contexts.</p> <p>4. Demonstrate the knowledge and insights required to make use of cellular and satellite communication in medical rescue contexts.</p> <p>5. Demonstrate the knowledge and insights required to make use of a computer-based web application / social media platforms in medical rescue contexts.</p> <p>6. Demonstrate the knowledge and insights required to make use of alternative Approaches to Communication in medical rescue contexts.</p> <p>7. Demonstrate the application of knowledge, skills and insights required to communicate professional and effectively during medical rescue training and operational contexts.</p>
High Angle Rescue	HAR01Y1	100%	0%	7	15	<p>The <i>High Angle Rescue</i> module focuses on the design, construction, application and analysis of rope rescue systems used to access, package, treat and extricate victims in a range of contexts including, urban, rural, industrial, wilderness and aquatic settings. Students completing this module should be able to demonstrate mastery of the theoretical principles, practical skills and related insights required to safely and effectively participate</p>	<p>1. Describe and discuss the cyclical nature of the phases and related activities involved in the management of medical rescue incidents in a high angle rescue context.</p> <p>2. Identify and describe the concept of backup and redundancy and those components of a rope rescue system that</p>

						<p>as a member of a rescue team in steep slope and high angle rescue contexts both in urban, rural and wilderness settings.</p>	<p>can or should be backed up.</p> <p>3. Build and operate redundant safety backup systems.</p> <p>4. Correctly rig rope rescue systems to safely and efficiently access patients in a variety of rope rescue contexts</p> <p>5. Safely and efficiently rig and operate systems for ascending and descending a rope.</p> <p>6. Critically consider immediate and ongoing patient care considerations against the rescue environment and context you find yourself to make appropriate decisions relating to the selection of stretcher and related packaging techniques.</p> <p>7. Engage with the patient and bystanders in a professional manner that enhances and addresses issues of patient comfort during a rope rescue operation.</p> <p>8. Safely and efficiently conduct patient packaging and stretcher rigging activities using different stretchers in a variety of rope rescue contexts.</p>
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						<p>9. Competently and confidently function as a stretcher attendant / "jockey".</p> <p>10. Explain the principles and physics behind the generation of mechanical advantage in rope rescue contexts.</p> <p>11. Competently and confidently build and operate mechanical advantage system in rope rescue contexts.</p> <p>12. Describe the typical composition of a high angle rescue team and the generic sequence of activities and events associated with the management of a steep slope and high angle rope rescue incident.</p> <p>13. Effectively lead a team and / or participate as a team member in the management of steep slope and high angle rescue incidents.</p> <p>14. Describe the potential applications for suspension systems in medical rescue contexts.</p> <p>15. Describe considerations that should be considered when selecting anchor points for a sustention system and the effect that</p>
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							<p>tensioning and loading the high wire has on the anchor points.</p> <p>16. Work as a member of a team to construct and operate a simple high wire and a compound suspension system.</p> <p>17. Explain the concepts, methods and approaches linked to lead climbing and how a cliff face may be ascended with a lead climber and a belayer.</p> <p>18. Identify and make use of devices for the anchoring of systems in wilderness settings.</p> <p>19. Confidently and competently participate in the high angle rescue operations in wilderness settings.</p>
Urban Rescue Operations	URO02Y2	100%	0%	6	50	<p>The <i>Urban Rescue Operations</i> module provides the student with the cognitive ability, technical skills and capabilities necessary for the search, access, packaging and extraction of a victim from a structural, industrial, construction, confined space, domestic or transport related incident</p>	<p>1. Demonstrate the ability to identify rescue incidents that may occur within built structures and infrastructure, construction, industrial, transport and domestic related incidents within an urban setting.</p> <p>2. Demonstrate an understanding and the ability to analyse common hazards associated with built structures and</p>

							<p>infrastructure, construction, industrial, transport and domestic related incidents within an urban setting.</p> <p>3. Demonstrate the ability to safely, effectively, efficiently and correctly mitigate and control risks associated with hazards identified at built structures and infrastructure, construction, industrial, transport and domestic related incidents within an urban setting.</p> <p>4. Demonstrate the ability search for and safely access a victim/s at a variety of urban-related incidents using technical rescue equipment and techniques.</p> <p>5. Demonstrate the ability to assess, treat, package, and extract a victim/s from a state of entrapment at a variety of urban-related incidents.</p>
Rural and Wilderness Rescue Operations	RWR02Y 2	100%	0%	6	35	<p>The <i>Rural and Wilderness Rescue Operations</i> module provides the student with the knowledge skills and insights required for safe and effective participation in search and rescue operations in wilderness, aquatic and aviation rescue contexts.</p>	<p>1. Identify and describe different types of maps including their construction, purpose and value for wilderness search and rescue activities.</p> <p>2. Correctly calculate and</p>



						<p>convert measured distances and predicted travel times on a map to corresponding times and distances in the real world.</p> <p>3. Make use of direction and magnetic bearings together with a system of longitude and latitude coordinates to accurately plot, rationalize and report position and direction of travel.</p> <p>4. Discuss the theory of search management and the associated underlying principles.</p> <p>5. Use theories and principles of search management to inform logical decision making in the management of a simulated case (desktop) study or a search and rescue incident in a real-world setting.</p> <p>6. Appreciate the fundamental differences between the delivery of pre-hospital emergency care in urban settings and emergency care practiced in austere remote wilderness settings.</p> <p>7. Provide contextually relevant emergency care for common</p>
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						<p>“complaints” conditions encountered in remote wilderness settings.</p> <p>8. Describe the core components of the global positioning system and its historical development.</p> <p>9. Explain how the different components of the GPS system function to allow for accurate reporting of position.</p> <p>10. Discuss the different applications for GPS systems.</p> <p>11. Make use of a GPS receiver to navigate.</p> <p>12. Provide a definition and description of a drone and the historical development of drone technologies.</p> <p>13. Discuss the use of drones in wilderness search and rescue operations.</p> <p>14. Describe the basic components and operation of a typical drone that is suitable for use in wilderness search and rescue settings.</p> <p>15. Provide a basic outline of the South African legislation governing the use of drones within the republic.</p> <p>16. Conduct operational readiness</p>
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						<p>inspections and prepare an all-terrain vehicle for deployment.</p> <p>17. Apply an understanding of the different modes of operation to select and activate appropriate drive modes for specific off-road contexts, terrains and surfaces.</p> <p>18. Safely and effectively load and unload an ATV onto a trailer.</p> <p>19. Demonstrate the ability to safely operate an all-terrain / 4x4 vehicle in an "off road" context.</p> <p>20. Describe the key requirements for survival in austere wilderness settings.</p> <p>21. Function safely and effectively in remote wilderness settings.</p> <p>22. Discuss the common causes for drowning.</p> <p>23. Describe the dangers associated with operating in aquatic rescue contexts.</p> <p>24. Demonstrate swimming and life saving skills and technique's suitable for safe and efficient participation in aquatic rescue contexts.</p> <p>25. Describe the pathophysiology of decompression sickness and</p>
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						<p>shallow water blackout.</p> <p>26. Describe the dangers associated with dams, rivers and swift water rescue operations.</p> <p>27. Demonstrate techniques for moving and navigating on inland water ways and rivers.</p> <p>28. Demonstrate and describe methods of rescuing patients from swift water rescue contexts.</p> <p>29. Identify and describe generic aircraft anatomy, flight controls and related surfaces.</p> <p>30. Describe the physical principles that are related to generation of lift and controlled flight.</p> <p>31. Describe the historical development of rotor winged aircraft and the contemporary role they now play in search and rescue contexts.</p> <p>32. Appreciate the dangers and vulnerabilities associated with the use of rotor winged aircraft in search and rescue contexts.</p> <p>33. Safely and efficiently move towards, enter, exit and move away from a rotor winged aircraft.</p> <p>34. Describe and demonstrate the principles and</p>
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							<p>processes associated with lowering a payload or pax from a rotor winged aircraft.</p> <p>35. Describe and demonstrate the principles and processes associated with hoisting a payload or pax from the ground into a rotor winged aircraft.</p> <p>36. Identify the characteristics of safe and unsafe landing zones.</p> <p>37. Demonstrate and describe the correct way of inspecting a watercraft prior to deployment.</p> <p>38. Safely and efficiently make use of a watercraft for search, rescue and transportation of patients in inland water rescue contexts.</p>
Physical Preparedness	PHP01 Y1 PHP02Y2	100%	0%	55	23	<p>The <i>Physical Preparedness</i> modules focuses on operational and functional physical preparedness, incorporating components of cardiovascular and muscle endurance, strength, flexibility, task-orientated swimming proficiency and diet.</p>	<p>1. Demonstrate swimming proficiencies suitable for safe and effective engagement in medical rescue training activities focusing on aquatic rescue training and operational contexts.</p> <p>2. Demonstrate cardiovascular fitness and general health and wellness suitable for safe and effective engagement in medical rescue training and operational contexts.</p> <p>3. Demonstrate</p>

							appropriate strength of grip, power to weight ratio and endurance suitable for safe and efficient engagement in medical rescue training and operational contexts.
Basic Sciences: Physics	PHY1DA1 PHY1D1B	100%	0%	5	6	The <i>Basic Sciences: Physics</i> module focuses on the definitions, methods and principles of concepts that are applicable to rescue, such as: levers, mechanics, mechanical advantage, hydraulics, forces, strength of components, vectors, pressure and friction	<ol style="list-style-type: none"> <li>1. Use scientific notation and the decimal system to manipulate SI-units.</li> <li>2. Apply knowledge of vector theory in mechanical problems.</li> <li>3. Formulate and explain the laws and definitions in kinetics and dynamics and apply these to solving problems in those fields.</li> <li>4. State the laws and define the physical quantities used in hydrostatics and apply these to solving problems in stationary fluids.</li> </ol> <p>Explain the processes whereby heat is transferred</p>
Basic Sciences: Chemistry	CET1DA1 CET1DB1	100%	0%	5	6	The <i>Basic Sciences: Chemistry</i> module's purpose is to develop the applicable knowledge and understanding of chemical principles and techniques of chemistry required for rescue.	<ol style="list-style-type: none"> <li>1. Describe matter using macroscopic and microscopic properties.</li> <li>2. List the different classes of elements in the periodic table and describe how they are likely to react.</li> <li>3. Explain the difference between atoms and elements, molecules and compounds.</li> <li>4. Perform basic chemical</li> </ol>

							<p>calculations using the formulas of compounds and balanced equations.</p> <p>5. Predict how gases behave under certain conditions.</p> <p>6. Classify different types of solutions, explain their properties and calculate their acidity.</p> <p>7. Identify the physical properties of the most common organic and inorganic compounds and predict how they will react.</p> <p>8. Explain the different types of radiation; know their medical applications and the dangers associated with exposure to each type.</p>
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#### BACHELOR OF HEALTH SCIENCES IN EMERGENCY MEDICAL CARE (B9E01Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Anatomy 1	ANT01Y1	100%	0%	5	12	Anatomy provides foundational knowledge for pathology and clinically related subjects. The content included an introduction to anatomy and physiology, chemistry for anatomy and physiology, the cell, basic histology, the integumentary system, bone and joints, muscle, the nervous system and special senses, the endocrine system,	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Give a detailed explanation of all the anatomical positions.</li> <li>• Give complete definitions and descriptions of all gross anatomical, osteological and histological terms related to anatomy.</li> <li>• Described and identify all body planes and body cavities.</li> </ul>

					<p>blood and the cardiovascular system, and the respiratory, digestive, urinary and reproductive systems. This module aided in the development of a student competent in the clinical knowledge and skills required to provide specialised emergency medical care and rescue services to all sectors of the community.</p>	<ul style="list-style-type: none"> <li>• Define body movements using correct anatomical terms.</li> <li>• Name two divisions of the skeletal system.</li> <li>• List the individual bones forming each division of the skeletal system.</li> <li>• Classify all the bones of the skeletal system.</li> <li>• List the characteristics and functions of epithelial tissue.</li> <li>• Name and describe the surface specializations (microvilli, cilia, flagella, stereocilia) of various epithelia and give their functions.</li> <li>• Describe the intercellular connections of epithelial tissue.</li> <li>• Identify, describe and name the location of the different types of epithelia.</li> <li>• Relate the structure of the different types of epithelia to the function they perform.</li> <li>• Describe glandular epithelium with regards to structure, function and location.</li> <li>• Describe the classification of connective tissue.</li> <li>• List and give the functions of the different types of cells, fibres and ground substance found in connective tissue.</li> <li>• For each type of connective tissue: identify it, describe its structure, describe where it is found in the body and relate its structure to its function in that location.</li> <li>• Explain how epithelial and connective tissues combine to form four different types of membranes and specify the functions of each.</li> <li>• Describe how connective tissue establishes the framework of the body.</li> <li>• For each type of muscle tissue: identify it, describe its structure,</li> </ul>
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						<p>describe where it is found in the body and relate its structure to its function in that location.</p> <ul style="list-style-type: none"> <li>• Describe the connective tissue sheaths related to muscle.</li> <li>• Describe the relationship between muscle fascicles, muscle fibres, myofibrils, myofilaments and the banding pattern of skeletal muscle.</li> <li>• Describe the anatomical components of the nervous system.</li> <li>• Sketch and label the structure of a typical neuron, describe the functions of each component and classify neurons on the basis of their structure, function and location.</li> <li>• Differentiate between a nuclei and a ganglion.</li> <li>• Describe the anatomy of a synapse.</li> <li>• Describe the locations and functions of the various types of neuroglia.</li> <li>• Classify the joints according to their structure and give examples for each class.</li> <li>• Classify the synovial joints according to their structure.</li> <li>• List the characteristics of synovial joints.</li> <li>• Name the structures stabilizing the synovial joints.</li> <li>• Describe the movements taking place at each class of synovial joints.</li> <li>• Classify all bones of the axial skeleton.</li> <li>• Identify bones of the axial skeleton.</li> <li>• Give the correct anatomical alignment of all axial skeleton bones.</li> <li>• Label the structures of the bones of the axial skeleton.</li> <li>• Label superficial muscles of the axial skeleton.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Classify all bones of the appendicular skeleton.</li> <li>• Identify bones of the appendicular skeleton.</li> <li>• Give the correct anatomical alignment of all appendicular skeleton bones.</li> <li>• Label the structures of the bones of appendicular skeleton.</li> <li>• Describe the following terms: <ul style="list-style-type: none"> <li>➤ Origin</li> <li>➤ Insertion</li> <li>➤ Action</li> <li>➤ Agonist</li> <li>➤ Antagonist</li> <li>➤ Synergist</li> </ul> </li> <li>• Name the skeletal muscles according to the following criteria: <ul style="list-style-type: none"> <li>➤ Fascicle organization</li> <li>➤ Location</li> <li>➤ Relative position</li> <li>➤ Structure, size and shape</li> <li>➤ Origin and insertion</li> <li>➤ Action</li> </ul> </li> <li>• Identify the following muscles of the axial skeleton: <ol style="list-style-type: none"> <li>1.Head and Neck <ol style="list-style-type: none"> <li>i.Muscles of Facial expression <ul style="list-style-type: none"> <li>➤ Orbicularis Oris</li> <li>➤ Epicranius</li> <li>➤ Orbicularis Oculi</li> <li>➤ Levator Palpebrae Superioris</li> <li>➤ Platysma.</li> </ul> </li> <li>ii.Extrinsic Eye Muscles <ul style="list-style-type: none"> <li>➤ Recti</li> <li>➤ Obliques</li> </ul> </li> <li>iii.Muscles of Mastication <ul style="list-style-type: none"> <li>➤ Masseter</li> <li>➤ Temporalis</li> <li>➤ Pterygoids.</li> </ul> </li> <li>iv.Muscles of the Tongue</li> <li>v.Muscles of the Pharynx</li> <li>vi.Muscles of the Larynx</li> <li>vii.Anterior Neck Muscles <ul style="list-style-type: none"> <li>➤ Sternocleidomastoid</li> <li>➤ Mylohyoid and digastric.</li> </ul> </li> </ol> </li> <li>2.Muscles of the Vertebral Column <ul style="list-style-type: none"> <li>➤ Trapezius</li> <li>➤ Latissimus dorsi</li> <li>➤ Erector Spinae.</li> </ul> </li> <li>3.Muscles of the Trunk</li> </ol> </li> </ul>
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							<ul style="list-style-type: none"> <li>➤ Intercostal muscles (External, Internal, Innermost)</li> <li>➤ Diaphragm</li> <li>➤ Anterior Abdominal muscles (Rectus Abdominus, Obliques, Transversus).</li> </ul> <ul style="list-style-type: none"> <li>• Identify the following muscles of the appendicular skeleton:</li> </ul> <p>1. Muscles of the Shoulder and Upper limb</p> <p>i. Muscles that position the Pectoral Girdle</p> <ul style="list-style-type: none"> <li>➤ Trapezius</li> <li>➤ Serratus Anterior</li> <li>➤ Pectoralis Minor.</li> </ul> <p>ii. Muscles that move the arm</p> <ul style="list-style-type: none"> <li>➤ Pectoralis Major</li> <li>➤ Deltoid</li> <li>➤ Supraspinatus</li> <li>➤ Latissimus Dorsi.</li> </ul> <p>iii. Muscles that move the Forearm, Hand and Fingers</p> <ul style="list-style-type: none"> <li>➤ Flexors of the forearm at the elbow: Biceps Brachii</li> <li>➤ Brachialis, Brachioradialis</li> <li>➤ Extensor of the forearm at the elbow: Triceps Brachii</li> <li>➤ Flexors of the hand at the wrist</li> <li>➤ Extensors of the hand at the wrist</li> <li>➤ Thenar Muscles</li> <li>➤ Hypothenar Muscles</li> <li>➤ Flexors and Extensors of the fingers at the Metacarpophalangeal joint</li> </ul> <p>2. Muscles of the Pelvis and Lower Limb</p> <p>i. Muscles that move the Thigh</p> <ul style="list-style-type: none"> <li>➤ Gluteal Group</li> <li>➤ Lateral Rotator Group</li> <li>➤ Iliopsoas.</li> </ul> <p>ii. Muscles that move the Leg</p> <ul style="list-style-type: none"> <li>➤ Flexors of the leg at the knee joint: Hamstrings.</li> </ul>
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						<ul style="list-style-type: none"> <li>➤ Extensors of the leg at the knee joint: Quadriceps femoris.</li> <li>iii. Muscles that move the Foot and Toes <ul style="list-style-type: none"> <li>➤ Dorsiflexors</li> <li>➤ Plantarflexors</li> <li>➤ Digital flexors</li> <li>➤ Digital extensors.</li> </ul> </li> <li>• Name the muscle or group of muscles innervated by the following nerve or plexuses: <ul style="list-style-type: none"> <li>➤ Oculomotor Nerve (Cranial Nerve III)</li> <li>➤ Trochlear Nerve (Cranial Nerve IV)</li> <li>➤ Trigeminal Nerve (Cranial Nerve V)</li> <li>➤ Abducens Nerve (Cranial Nerve VI)</li> <li>➤ Facial Nerve (Cranial Nerve VII)</li> <li>➤ Glossopharyngeal Nerve (Cranial Nerve IX)</li> <li>➤ Vagus Nerve (Cranial Nerve X)</li> <li>➤ Accessory Nerve (Cranial Nerve XI)</li> <li>➤ Hypoglossal Nerve (Cranial Nerve XII)</li> </ul> </li> <li>• Describe the anatomical and functional divisions of the nervous system</li> <li>• Label a typical neuron and describe the functions of each component</li> <li>• Describe the structure of the synapse.</li> <li>• Classify neurons according to their structure and function</li> <li>• Describe the location and functions of neuroglia</li> <li>• Relate the structural components of the central nervous system to those of the peripheral nervous system</li> <li>• Discuss the structure and the function of the spinal cord</li> <li>• Describe the three meningeal layers that surround the central nervous system</li> <li>• Explain the roles of white and gray matter in processing and relaying sensory information and motor commands</li> </ul>
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						<ul style="list-style-type: none"> <li>• Describe the components of a spinal nerve</li> <li>• Distinguish between motor and sensory distribution of spinal nerves</li> <li>• Relate the distribution pattern of spinal nerves to the regions they innervate.</li> <li>• Name the major regions of the brain and describe their functions</li> <li>• Name, locate the ventricles of the brain and describe the connection between them and the subarachnoid space</li> <li>• Explain five ways in which the brain is protected</li> <li>• Discuss the formation, circulation and functions of cerebrospinal fluid</li> <li>• Describe the external features of the medulla</li> <li>• Relate each of the nuclei to their specific function</li> <li>• Describe the structure of the pons</li> <li>• Describe the structure of the cerebellum</li> <li>• Describe the gross anatomical structure of the mesencephalon</li> <li>• List the different parts that form the diencephalon</li> <li>• Name the boundaries of the diencephalon</li> <li>• Name parts of the brain that forms the limbic system</li> <li>• Distinguish between the cerebral cortex and basal nuclei</li> <li>• Locate the sensory, motor and association areas of the brain and explain their functions</li> <li>• Identify the major integrative centres of the cerebrum</li> <li>• Comment on brain lateralisation</li> <li>• Describe the white matter and capsules of the brain</li> <li>• Name the cranial nerves</li> <li>• Name the foramina of the skull traversed by each cranial nerve.</li> <li>• Identify if the nerve is sensory, motor or mix</li> </ul>
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						<ul style="list-style-type: none"> <li>• Relate the nerve to its function</li> <li>• Explain what is meant by the somatic nervous system</li> <li>• Trace the path of the motor impulse from the brain to the organ</li> <li>• Trace the path of the sensory impulse from receptor organ to the brain</li> <li>• Describe the pathways of the somatic and autonomic nervous systems</li> <li>• Give an overview of the functions of the sympathetic and parasympathetic divisions of the autonomic nervous systems</li> <li>• Locate the sympathetic chain, collateral ganglia and suprarenal medullae and relate them to the structural organisation of the sympathetic division</li> <li>• Locate the different ganglia of the parasympathetic nervous system and relate them to the structural organisation of the parasympathetic division</li> <li>• Describe the location, structure, and functions of the pituitary gland, thyroid gland, parathyroid glands, suprarenal (adrenal) glands, pineal gland, thymus, pancreas, testes and ovaries.</li> <li>• Summarise the functions of each of the components of the human reproductive system</li> <li>• Distinguish between the primary and accessory structures in the male reproductive system</li> <li>• Name the ducts that receive and transport sperm in the correct sequence</li> <li>• Name the accessory glands of the male reproductive system</li> <li>• Describe the structure and histology of the testes</li> <li>• Outline the process of spermatogenesis</li> </ul>
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						<ul style="list-style-type: none"> <li>• Describe the location and functions of the epididymis, ductus deferens, ejaculatory duct and urethra</li> <li>• Describe the secretions and functions of the seminal vesicles, prostate gland, and bulbourethral glands</li> <li>• Describe the composition of semen</li> <li>• Briefly describe the structure and functions of the external genitalia of the male</li> <li>• Distinguish between the primary and accessory structures in the female reproductive system</li> <li>• Locate and describe the structure of the ovaries</li> <li>• Outline the events of oogenesis</li> <li>• Distinguish the various parts of the uterine tubes</li> <li>• Relate functions of the uterine tubes to its histology</li> <li>• Describe the internal anatomy of the uterus</li> <li>• Describe the uterine wall</li> <li>• Briefly describe the structure and functions of the external genitalia of the female</li> <li>• Relate the structures of the mammary glands to their functions</li> <li>• Identify the components of the urinary system and describe the vital functions performed by this system.</li> <li>• Describe the structure of the kidneys.</li> <li>• Identify the major blood vessels associated with each kidney and trace the path of blood flow through the kidney</li> <li>• Describe the structure of the nephron, including the microanatomy of the renal corpuscle</li> <li>• Describe the structures and functions of the ureters, urinary bladder and urethra</li> <li>• Describe the primary functions of the respiratory system</li> </ul>
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						<ul style="list-style-type: none"> <li>• List the components of the respiratory airways and describe the structural and functional classification of these components</li> <li>• Identify the organs of the respiratory system and describe their functions.</li> <li>• Describe the gross anatomy and histology of the following respiratory airways: nasal cavity, pharynx, larynx, trachea, bronchi, bronchioles and alveoli.</li> <li>• Describe the neural and local control of bronchiolar musculature.</li> <li>• Describe the macro- and microscopic anatomy of the lungs.</li> <li>• List the general functions of the digestive system.</li> <li>• Identify the organs of the digestive system and describe their major functions.</li> <li>• Describe the location of the peritoneal cavity, define the term retro-peritoneal and name the retroperitoneal organs.</li> <li>• Describe the functional histology of the digestive tract.</li> <li>• List and describe the mechanisms that regulate or control the activities of the digestive system.</li> <li>• Describe the anatomy and basic functions of the oral cavity, tongue, salivary glands, teeth and pharynx.</li> <li>• Describe the gross anatomy and histology of the oesophagus.</li> <li>• Describe the functions of the stomach.</li> <li>• Describe the anatomy of the stomach, including its histological features.</li> <li>• Describe the anatomical and histological characteristics of the small intestine.</li> <li>• Describe the structure and functions of the pancreas, liver and gallbladder, and explain how their activities are</li> </ul>
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						<p>regulated and coordinated.</p> <ul style="list-style-type: none"> <li>• List the components of the circulatory system.</li> <li>• Describe the functions of the cardiovascular system.</li> <li>• Differentiate between arteries and veins in terms of their function.</li> <li>• Define the terms, pulmonary and systemic circuits and trace the flow of blood through these circuits.</li> <li>• Describe the general location of the heart.</li> <li>• List the four chambers of the heart and describe the main structural and functional differences between each one.</li> <li>• Describe the locations, structure and functions of the heart valves.</li> <li>• Identify the layers of the heart wall and describe the structure of each layer.</li> <li>• Identify the blood vessels which empty into and drain the heart.</li> <li>• Describe the nerve innervation of the heart wall.</li> <li>• Describe the blood supply of the heart wall.</li> <li>• Trace the flow of blood through the heart, identifying the pulmonary and systemic circuits, the main blood vessels, the heart chambers and the heart valves.</li> <li>• Identify the three layers that constitute the walls of most blood vessels.</li> <li>• Differentiate between arteries and veins in terms of their structure.</li> <li>• Compare the different types of blood vessels in terms of their structure and functions.</li> <li>• Define the term angiogenesis.</li> <li>• Identify the major systemic arteries and their locations.</li> <li>• Identify the major systemic veins and their locations.</li> </ul>
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							<ul style="list-style-type: none"><li>• Identify the skeletal landmarks of the head and neck.</li><li>• Identify the triangles of the neck.</li><li>• Identify the skeletal landmarks of the thorax.</li><li>• Identify the planes/lines of the thorax.</li><li>• Identify surface markings of the cavities and viscera of the thorax</li><li>• Identify the skeletal landmarks of the abdomen and pelvis.</li><li>• Identify the planes/lines of the abdomen and pelvis.</li><li>• Identify surface markings of the cavities and viscera of the abdomen and pelvis.</li><li>• Identify the skeletal landmarks of the upper and lower limbs.</li><li>• Identify the compartments, surface markings of muscles and vasculature of the upper and lower limbs.</li></ul>
Aquatic Rescue	AQR01Y3	100%	0%	6	12	<p>The aim of this module was to provide the student with the necessary skill, knowledge and insight needed to:</p> <ul style="list-style-type: none"><li>• Function as an aquatic rescuer.</li><li>• Perform a surface rescue of a patient in an aquatic rescue environment from a static body of water.</li><li>• Rescue a victim from a swift water environment on their own or with a team</li><li>• Move in and through a river in a safe and efficient manner.</li><li>• Rescue a victim from swift water with the use of minimum resources.</li><li>• Rescue a victim from swift water with the use of</li></ul>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"><li>• Discuss the construction, maintenance and correct use of the general items of aquatic rescue equipment as discussed</li><li>• Explain the correct procedures for checking the listed items for serviceability</li><li>• Correctly identify and make use of the listed items of aquatic rescue equipment.</li><li>• Demonstrate the correct technique for checking and inspecting items of equipment for serviceability</li><li>• Don and doff PFDs correctly</li><li>• Correctly package a patient in the water</li><li>• Throw a throw rescue bag to a patient 15 meters away</li><li>• Discuss and describe the various methods of</li></ul>

						<p>specialized equipment.</p> <ul style="list-style-type: none"> <li>• Use inflatable boats in swift water rescue.</li> <li>• Provide the students with the basic skills needed to work safely with and around small craft in the water.</li> </ul>	<p>entering the water, approaching and securing the victim as well as towing and extracting the patient.</p> <ul style="list-style-type: none"> <li>• Explain the advantages, disadvantages and indications for any of the listed techniques.</li> <li>• Discuss methods of communicating under water</li> <li>• Swim 200 meters in 5 min or less</li> <li>• Swim a distance of 2000 meters (With the aid of a flotation device or PFD)</li> <li>• Tread water for 20 min</li> <li>• Swim down 4 meters (breath held) and retrieve a patient from the bottom</li> <li>• Approach and secure a panicked patient in the water</li> <li>• Tow an exhausted swimmer to the side</li> <li>• Remove a patient from the water</li> <li>• Demonstrate the correct entry methods</li> <li>• Function as a member of a breath held dive team to perform simple tasks under water</li> <li>• Swim a distance of at least 30 meters under water</li> <li>• Communicate adequately under water</li> <li>• Explain the differences between a dam and a lake and how the differences affect rescue operations</li> <li>• Discuss dangers that are associated with dams and lakes</li> <li>• Describe the common incidents that may occur near or on dams &amp; lakes</li> <li>• Discuss the management of a surface rescue</li> <li>• Explain the common causes of drowning and near drowning</li> <li>• Explain in detail why a low head dam is such a dangerous area for swimmers and rescue activities</li> </ul>
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						<ul style="list-style-type: none"> <li>• Draw and label a low head dam</li> <li>• Discuss the various methods of performing a low head dam rescue</li> <li>• Organise and manage a rescue from a dam or lake in a logical and efficient manner</li> <li>• Enter the water and swim out using both the torpedo boy as well as the line and reel</li> <li>• Demonstrate the self-help procedures for escaping from a low head dam or weir</li> <li>• Demonstrate the correct methods of searching shallow water for a submerged victim</li> <li>• Discuss the common causes for drowning in rivers</li> <li>• Discuss and describe the dangers associated with swift moving water</li> <li>• Discuss the environmental hazards associated with river rescue</li> <li>• Discuss swift water rescue philosophy</li> <li>• Discuss river safety</li> <li>• Discuss the importance of proper preplanning</li> <li>• Draw and label a typical river indicating the following features: <ul style="list-style-type: none"> <li>➤ Undercut banks</li> <li>➤ Eddies</li> <li>➤ Strainers</li> <li>➤ Reversals</li> </ul> </li> <li>• Discuss the effect that gradient and river topography has on the flow rate</li> <li>• Identify features caused by moving water</li> <li>• Discuss the construction, maintenance and correct use of the general items of swift water rescue equipment as discussed</li> <li>• Explain the correct procedures for checking the listed items for serviceability</li> <li>• Discuss the importance of securing equipment</li> </ul>
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						<ul style="list-style-type: none"> <li>• Correctly identify and make use of the listed items of swift water rescue equipment</li> <li>• Demonstrate the correct technique for checking and inspecting items of equipment for serviceability</li> <li>• Don and doff PFD's correctly</li> <li>• Discuss river communication methods</li> <li>• Describe the various methods of crossing a fast moving river</li> <li>• Demonstrate the ability to swim and move in fast moving water safely</li> <li>• Demonstrate the ability to cross a fast moving river safely as a single person or in a group</li> <li>• Describe the common incidents that may occur in fast moving water as well as the general principles of management for each incident</li> <li>• Discuss and describe the various methods of entering the water, approaching and securing the victim as well as extracting the patient.</li> <li>• Explain the importance of choosing the correct extraction point for the patient</li> <li>• Extract a patient from swift water</li> <li>• Approach a panicking victim</li> <li>• Demonstrate making contact using lifesaving locks, holds and recovery styles</li> <li>• Throw a throw bag to a patient 15 meters away</li> <li>• Demonstrate removing patients from the water</li> <li>• Discuss and describe the use of a zip lines for patient extraction</li> <li>• Discuss and describe the use of a high wire for patient extraction</li> <li>• Build and operate a zip line system correctly</li> <li>• Build and operate a high wire correctly</li> </ul>
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						<ul style="list-style-type: none"> <li>• Explain how to perform a rescue when an inflatable boat is stranded</li> <li>• Explain how to use an inflatable boat to do a swift water rescue</li> <li>• Demonstrate how to rescue a inflatable boat when it is stranded</li> <li>• Demonstrate how to do a swift water rescue using an inflatable boat</li> <li>• Demonstrate effectiveness in handling a swift water boat</li> <li>• Draw and label the basic anatomy of a small boat</li> <li>• Discuss the advantages and disadvantages of the different hull designs</li> <li>• Draw and label the various components of an outboard motor</li> <li>• Discuss Archimedes's principle in relation to the draft of a boat in the water</li> <li>• Explain the effect of trimming a motor whilst moving</li> <li>• Describe the correct procedure for transporting a boat</li> <li>• Describe the correct procedure for launching a boat from trailer into the water</li> <li>• Explain the general safety rules that should be obeyed when working with and around small craft</li> <li>• Explain the function as well as the advantages and disadvantages of a lanyard stop switch</li> <li>• Discuss the effect centre of gravity has on a boat as well as how loading patterns can affect the handling of a boat</li> <li>• Explain the dangers of carbon monoxide poisoning with boats</li> <li>• Discuss the maintenance of an outboard motor as well as the advantages and disadvantages two stroke, four stroke,</li> </ul>
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							inboard and outboard motors <ul style="list-style-type: none"> <li>• Pilot a small craft safely and effectively</li> <li>• Launch a boat from a trailer into the water safely and effectively</li> <li>• Approach a patient in the water in the correct manner</li> <li>• Perform a high speed bail off</li> <li>• Remove patients from underneath a capsized boat</li> <li>• Deploy a standard anchor</li> <li>• Remove a boat from the water correctly</li> <li>• Move patient from the water into the boat and onto the land correctly</li> <li>• Perform the pre-launch system checks correctly</li> <li>• Disconnect, refuel and re connect fuel systems safely and efficiently</li> <li>• Correctly tow connect and tow a disabled craft</li> <li>• Activate and deactivate a lanyard stop switch</li> <li>• Perform an emergency stop from the plane</li> <li>• Start a motor using the emergency line</li> <li>• Correctly deploy a drogue anchor</li> <li>• Demonstrate the correct techniques for signalling distress</li> </ul>
Aviation Rescue	AVR01Y3	100%	0%	6	3	The aim of this module was to provide the student with the knowledge, skills and insight needed to function and work with a rotor winged aircraft in the rescue environment.	Throughout completion of this module, the following learning outcomes were achieved: <ul style="list-style-type: none"> <li>• Discuss the use of aircraft for medical rescue purposes</li> <li>• List the common types of aircraft used for rescue purposes</li> <li>• Explain the correct procedure one needs to follow in order to activate an aircraft for a medical rescue incident</li> <li>• Discuss the general considerations one needs to take into account before activating an aircraft for an incident.</li> </ul>

						<ul style="list-style-type: none"> <li>• Explain the general physics behind the generation of lift and flight</li> <li>• Discuss the advantages &amp; disadvantages of rotor wing aircraft</li> <li>• Describe and discuss the dangers associated with working in and around rotor wing aircraft</li> <li>• Describe the ideal characteristics of a good landing zone for rotor winged aircraft</li> <li>• Explain how one would go about creating an emergency landing zone for a rotor winged aircraft during the day and at night</li> <li>• Discuss and describe the various methods of signaling to and communicating with an aircraft from the ground</li> <li>• Identify and neutralize potential hazards for the aircraft and rescue crew</li> <li>• Safely approach a rotor winged aircraft on the ground</li> <li>• Construct an emergency landing zone for a rotor winged aircraft by day and at night in a built up area</li> <li>• Construct an emergency landing zone for a rotor winged aircraft by day and at night in a rural area</li> <li>• Correctly deploy a smoke grenades and other signalling devices</li> <li>• Signal to an aircraft using a heliograph mirror</li> <li>• Demonstrate hoisting and lowering of the rescuer with a hoisting strap (rescue strop) and a rescue harness.</li> <li>• Demonstrate the hoisting of stretchers from water, from a mountain top and from a mountain slope.</li> <li>• Demonstrate how to rescue / hoist a patient from water.</li> </ul>
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Basic Science: Chemistry	CHB1BB1	50%	50%	5	6	<p>The purpose of this module was to develop the knowledge and understanding of chemical principles and techniques of chemistry required for later Emergency Medical Care modules.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Homo- and heterogeneous matter can be identified and described.</li> <li>• Separation of mixtures can be described.</li> <li>• Microscopic descriptions (atoms, molecules) can be differentiated from macroscopic descriptions (solids, liquids and gases).</li> <li>• Pure substances can be differentiated from mixtures.</li> <li>• Compounds can be differentiated from elements.</li> <li>• Qualitative descriptions of matter can be differentiated from quantitative descriptions.</li> <li>• Physical and chemical properties can be identified, described and examples given.</li> <li>• Intensive and extensive properties can be identified, described and examples given.</li> <li>• Elements can be classified as metals, non-metals and semimetals based on their position in the periodic table.</li> <li>• Main Group elements, Transition metals, and Lanthanides and Actinides can be located.</li> <li>• Atoms / elements are identified using the information given in the periodic table namely: name, symbol, atomic number and average atomic weight.</li> <li>• Protons, neutrons, electrons, nucleus or nuclides, are identified for specific atoms.</li> <li>• Atomic number (Z) and mass number (A) can be given for specific atoms.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Isotopes can be identified using full names and full symbols.</li> <li>• Macroscopic terms (elements and compounds) are differentiated from microscopic terms (atoms and molecules).</li> <li>• The terms 'relative atomic mass', 'atomic mass', 'relative molecular mass', 'molecular mass' are known and can be differentiated from each other.</li> <li>• Average relative atomic masses can be calculated from isotopic abundances.</li> <li>• Bohr models to represent electrons and Lewis structures to represent valence electrons of atoms of elements can be drawn.</li> <li>• The terms valence electrons, core electrons and valency can be described.</li> <li>• Group properties can be related to electron structure.</li> <li>• Atoms and ions, cations and anions are known and represented using symbols.</li> <li>• Correct names and charges are given to cations and anions.</li> <li>• The Octet rule is known and is used to predict number of covalent bonds or number of electrons lost or gained when ions form.</li> <li>• The Periodic Table is used to predict whether atoms will lose, gain or share electrons.</li> <li>• Metallic bonding is described using the electron sea model.</li> <li>• Ionic, and covalent bonding are described using Lewis dot and cross structures.</li> <li>• Properties of metallic, ionic and covalent compounds can be listed and related to their bonding.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Trends in electronegativity can be accounted for and used to explain unequal sharing of electrons.</li> <li>• Forces between molecules can be predicted and differentiated from bonds inside molecules.</li> <li>• Formulas can be given from an element or compound name and vice versa.</li> <li>• Percent composition can be calculated from chemical formulas.</li> <li>• Avogadro's number can be given to 4 significant figures.</li> <li>• Calculations demonstrating the smallness of atoms and largeness of Avogadro's number can be performed.</li> <li>• Conversions between grams <math>\leftrightarrow</math> moles <math>\leftrightarrow</math> particles can be performed.</li> <li>• The term amount, which replaces the term "number of moles", is correctly applied.</li> <li>• Word equations can be written.</li> <li>• Sketches showing balanced numbers of atoms and molecules in reactions can be drawn.</li> <li>• Equations can be balanced using taught strategies.</li> <li>• Reagents / reactants, products and stoichiometric coefficients can be identified and described.</li> <li>• Composition (synthesis), decomposition, single replacement, double replacement (exchange / metathesis) reactions can be identified and the products formed can be predicted.</li> <li>• Stoichiometric ratios can be identified and used to calculate quantities of reagents used or products formed.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Different types of radiation can be identified.</li> <li>• Equations and calculations can be used to explain what happens to the nucleus during radioactive decay.</li> <li>• Minimum protection levels are known and can be applied.</li> <li>• Potential dangers and health hazards can be listed.</li> <li>• Medical uses can be listed.</li> <li>• Properties of gases are related to their microscopic properties.</li> <li>• Relationships between temperature pressure and volume are known.</li> <li>• The properties and precautions associated with commonly used gases are listed correctly.</li> <li>• The reason that a scuba diver would get 'the bends' are correctly identified and actions taken to combat this problem are accurately listed.</li> <li>• The shape of a water molecule can be drawn.</li> <li>• The polarity of the water molecule can be described using the electronegativities of oxygen and hydrogen.</li> <li>• A diagram showing the intramolecular forces (known as hydrogen bonding) in water can be drawn.</li> <li>• The physical properties of water are listed and related to the structure of water.</li> <li>• Four factors affecting solubility are described.</li> <li>• Diagrams showing the products of the dissolving process can be drawn.</li> <li>• Equations that include phase labels are used to describe the dissolving process.</li> <li>• The terms "solute", "solvent", "solution" "aqueous ions", "dilute",</li> </ul>
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						<p>“concentrated” and “saturated solutions”, and “electrolyte” can be described.</p> <ul style="list-style-type: none"> <li>• Calculations involving percent composition and molarity of solutions can be performed.</li> <li>• The properties of pure solutions, colloids, suspensions and emulsions are described.</li> <li>• Differences between each solution type are clearly identified.</li> <li>• Macroscopic and microscopic properties (Arrhenius definition only) of acids and bases are correctly described.</li> <li>• The terms “strong” and “weak” are used to correctly describe acids and bases and can be illustrated using equations.</li> <li>• Equations and definitions are used to explain the terms “mono-” “di-” and “poly-protic” acids.</li> <li>• Acid-base reactions are described using equations and products formed are named and identified using phase labels.</li> <li>• The term “autoionisation” (also called autoprotolysis or autodissociation) is defined correctly and explained using a balanced equation.</li> <li>• The symbol used to indicate a reversible reaction ( ) is known and used appropriately to indicate the autoionisation of water.</li> <li>• The derivation of the dissociation constant of water is known.</li> <li>• The relationships between pH and pOH are known.</li> <li>• pH and pOH are correctly calculated from supplied information using taught strategies.</li> <li>• The principle of buffers is understood and can</li> </ul>
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						<p>be applied to processes in the human body.</p> <ul style="list-style-type: none"> <li>• Organic compounds are correctly identified.</li> <li>• Suitable examples (e.g. benzene and sodium chloride) are used to compare the properties (chemical and physical) of organic and inorganic compounds.</li> <li>• Structural, molecular and condensed formulae are correctly identified and used.</li> <li>• Common functional groups are identified using their names, structures and formulae.</li> <li>• Proper distinction is made between aliphatic and aromatic compounds.</li> <li>• Primary, secondary and tertiary carbon atoms are distinguished from each other.</li> <li>• Principal uses of hydrocarbons are given.</li> <li>• The term homologous series is correctly defined using suitable examples.</li> <li>• Physical properties (solubility in water and other organic compounds, boiling/melting points phase at room temperature and density) of hydrocarbons are correctly described.</li> <li>• IUPAC and common names of simple and branched alkanes and cycloalkanes are correctly given.</li> <li>• Simple and branched structures of alkanes and cycloalkanes are drawn correctly.</li> <li>• Boiling point trends and other physical properties of alkanes can be correctly identified and explained.</li> <li>• Reactions of alkanes, alkenes and alkynes can be given using simple equations.</li> <li>• Uses of alkanes and cycloalkanes are listed.</li> </ul>
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							<ul style="list-style-type: none"> <li>• Structure and functional groups of each group can be identified using formulas.</li> <li>• Functional groups can be identified from the compound name.</li> <li>• Physical and chemical properties of each group can be identified.</li> <li>• Biological importance of each group can be explained.</li> <li>• Compounds can be distinguished from each other and reactions and structures of each type of compound can be identified.</li> <li>• Biological importance of each group can be explained.</li> </ul>
Basic Science: Physics	PHB1AA1	50%	50%	6	5	<p>By participating in all the learning activities and applying the principles, the student will be able to master the following life skills, also known as critical outcomes:</p> <ul style="list-style-type: none"> <li>• Identify and solve problems.</li> <li>• Work effectively as a member of a team or group.</li> <li>• Communicate effectively verbally and in writing.</li> <li>• Organize yourself and your activities responsibly and effectively.</li> <li>• Collect, analyze, organize and critically evaluate information.</li> <li>• Use Science and Technology effectively.</li> <li>• Understand the world as a set of related systems that do not exist in isolation.</li> </ul> <p>In addition to the above, the student will gain a factual knowledge of definitions, methods and principles in Physics which he/she</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Use scientific notation and units</li> <li>• Manipulate SI-units</li> <li>• Display knowledge of the decimal system.</li> <li>• Explain the terms: scalar, vector, resultant.</li> <li>• Represent a vector on paper.</li> <li>• Add vectors using the triangle and parallelogram rules.</li> <li>• Explain the terms: distance, displacement, speed, velocity, average speed, average velocity and acceleration.</li> <li>• Apply the equations of motion to solve problems</li> <li>• Explain the terms: force, mass, weight, the newton.</li> <li>• State Newton's laws of motion.</li> <li>• Apply Newton's laws to solve problems.</li> <li>• Explain the terms: momentum, work, the joule, power, the watt, energy, potential energy, kinetic energy, conservation of energy.</li> <li>• Solve problems involving the above concepts</li> <li>• Explain the concepts: machine, principle of work, actual mechanical advantage, ideal</li> </ul>

						<p>will require in the study of this specific chosen field. A broad background knowledge of Physics will also aid the student in the understanding and interpretation of future technological development.</p>	<p>mechanical advantage, efficiency of a machine.</p> <ul style="list-style-type: none"> <li>•Apply the above concepts to the lever, the wheel and axle, the inclined plane, and the screw and pulley systems.</li> <li>•Explain the concepts density and relative density.</li> <li>•Apply the above concepts in solving problems</li> <li>•State the principle of Archimedes.</li> <li>•Use this principle to solve relevant problems.</li> <li>•Draw an annotated diagram of a hydrometer.</li> <li>•Explain the concepts: pressure, the pascal, Pascal's principle, atmospheric pressure, standard pressure.</li> <li>•Solve problems involving the above concepts.</li> <li>•Draw an annotated diagram of a barometer.</li> <li>•List reasons for mercury as preferred barometer liquid.</li> <li>•State the three (3) gas laws.</li> <li>•Solve problems involving these laws as well as the general gas equation.</li> <li>•Explain what heat is as well as the three (3) ways in which heat can be transferred.</li> </ul>
Clinical Practice 1	EMC03Y1	100%	0%	6	35	<p>The purpose of studying Emergency Medical Care I was that the student developed and demonstrated the following practical, foundational and reflective outcomes on the culmination of their learning activities:</p> <ul style="list-style-type: none"> <li>• Manage the pre-hospital emergency scene and patient, solve clinical problems and apply theoretical understanding of emergency medical care in the effective assessment and treatment of medical</li> </ul>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Manage the pre-hospital emergency scene and patient, solve clinical problems and apply theoretical understanding of emergency medical care in the effective assessment and treatment of medical emergencies at an introductory level and with reference to the specific systems and disorders included in Emergency Medical Care I.</li> <li>• Justify all interventions and omissions related to pre-hospital emergency patient and scene assessment and</li> </ul>



						<p>emergencies at an introductory level and with reference to the specific systems and disorders included in Emergency Medical Care I.</p> <ul style="list-style-type: none"> <li>• Justify all interventions and omissions related to pre-hospital emergency patient and scene assessment and treatment based on application of theoretical principles of patient and scene assessment, disease processes and Emergency Medical Service systems.</li> <li>• Innovate and apply knowledge in new contexts as well as make decisions, think strategically, organise and work effectively as part of a team.</li> </ul>	<p>management based on application of theoretical principles of patient and scene assessment, disease processes and Emergency Medical Service systems at an introductory level and with reference to the specific systems and disorders included in Emergency Medical Care I.</p> <ul style="list-style-type: none"> <li>• Innovate and apply knowledge in new contexts as well as make decisions, think strategically, organise and work effectively as part of a team at an introductory level and with reference to the specific criteria included in Emergency Medical Care I.</li> <li>• Reflect on your practice, ask questions and heed advice to mould yourself into an ever-improving, always reflective and constantly advancing Emergency Care Practitioner.</li> <li>• Demonstrate the ability to effectively communicate with patients and members of staff in a professional and ethical manner: <ul style="list-style-type: none"> <li>➤ Professional and ethical communication with patients is correctly demonstrated</li> <li>➤ Professional and ethical communication with members of staff is correctly demonstrated.</li> </ul> </li> <li>• Provide insight into the general management of an ambulance service and its daily functions: <ul style="list-style-type: none"> <li>➤ Fundamental methods and operating procedures of an ambulance service are logically appraised</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>➤ Assisting ambulance staff with daily checks is logically reflected on</li> <li>• Show supporting evidence which refers to the skills and assessments that must be performed in the clinical practice setting: <ul style="list-style-type: none"> <li>➤ Documentation pertaining to skills and assessments performed with a mentor is correctly recorded and documented</li> </ul> </li> <li>• Demonstrate the ability to read a published article, identify relevant information and extract this information in a meaningful manner.</li> <li>• Demonstrate the ability to generate a case study and a case presentation: <ul style="list-style-type: none"> <li>➤ Case studies are appropriately constructed in accordance with departmental policies</li> <li>➤ Case presentations are logically presented to a class of peers who will critique the presentation.</li> </ul> </li> <li>• Demonstrate the ability to accurately document patient care records and related administrative documents: <ul style="list-style-type: none"> <li>➤ Patient care records are accurately completed and captured on the department's EMDAS system.</li> </ul> </li> <li>• Generate a reflective journal which relates to your clinical practice experience: <ul style="list-style-type: none"> <li>➤ A Reflective journal is logically created and details the learner's clinical practice experience.</li> </ul> </li> </ul>
Clinical Practice 2	EMC03Y2	100%	0%	6	40	Practical competence and experience, in	Throughout completion of this module, the following

					<p>addition to theoretical learning, has always been a fundamental premise upon which the philosophy of practical-based education has been founded. In the context of Emergency Medical Care, competence in clinical assessment and the diagnosing of patients in the pre-hospital and hospital environment forms an essential part of the education of Emergency Medical Care students. Such competence is learned most effectively by combining theoretical learning and simulated practical approaches with clinical practice in the “real world” of emergency care under the guidance and supervision of mentors and supervisors. Theoretical learning can never be effective in isolation, neither can practical ability. This module therefore allowed the student to participate and engage meaningfully in the clinical environment and in so doing assumed full responsibility for their own learning. Mentors within the hospital and pre-hospital setting provided the student with a learning environment in which they offered meaningful feedback to the student as well as comment thereon. The module served as an extremely important component in moulding/building the student's relationships/interacti</p>	<p>learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Demonstrate the ability to effectively communicate with patients and members of staff in a professional and ethical manner: <ul style="list-style-type: none"> <li>○ Professional and ethical communication with patient's is correctly demonstrated;</li> <li>○ Professional and ethical communication with members of staff is correctly demonstrated.</li> </ul> </li> <li>• Provide insight into the general management of a ward/hospital and its daily functions: <ul style="list-style-type: none"> <li>○ Fundamental methods and operating procedures of a ward/hospital is logically appraised;</li> <li>○ Assisting ward staff with daily checks is logically reflected on</li> </ul> </li> <li>• Show supporting evidence which refers to the skills and assessments that must be performed in the clinical practice setting: <ul style="list-style-type: none"> <li>○ Documentation pertaining to skills and assessments performed with a mentor is correctly recorded and documented.</li> </ul> </li> <li>• Demonstrate the ability to generate a case study and a case presentation: <ul style="list-style-type: none"> <li>○ Case studies are appropriately constructed in accordance with departmental policies;</li> <li>○ Case presentations are logically presented to a class of peers who may present questions based on the presentation.</li> </ul> </li> </ul>
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						<p>ons as well as developed the understanding of the student's role within the hospital and pre-hospital environment.</p>	<ul style="list-style-type: none"> <li>• Demonstrate the ability to accurately document patient care records and related administrative documents: <ul style="list-style-type: none"> <li>○ Patient care records are accurately completed and captured on the department's EMDATA system.</li> </ul> </li> <li>• Reflect on the practice during your clinical practice experience: <ul style="list-style-type: none"> <li>○ A logical presentation which details the learners clinical practice experience.</li> </ul> </li> </ul>
Clinical Practice 3	EMC03Y3	100%	0%	7	24	<p>The Emergency Medical Care III Clinical Practice Module dealt with practical application of theoretical knowledge and understanding of advanced life support practice in the prehospital and emergency department settings. On completion the student should be able to integrate their understanding of anatomy, physiology, pathology and professional practice to patient care to the level of Emergency Care Practitioners. This module also aimed to equip the student with the ability to confidently and professionally interact with patients, make accurate diagnoses and sound clinical judgments that inform and validates decisions regarding patient care and treatment.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Demonstrate effective communication and apply the principles of medical ethics, professional behaviour and the legal framework to the context within which emergency care practitioners operate while maintaining personal health, wellness and safety during Work Integrated Learning opportunities.</li> <li>• Practice and facilitate the provision of emergency medical care to real patients suffering from illnesses and injuries found in the South African pre-hospital setting.</li> <li>• Show that you understand the management, structure and function of Emergency Medical Service (EMS) systems in South Africa by effectively working as part of the team you are rostered with on a variety of emergency scenes.</li> <li>• Develop research skills and conduct research in emergency medical care and rescue by compiling case studies.</li> </ul>

							<ul style="list-style-type: none"> <li>Critically reflect on learning that has occurred during clinical experiential road shifts by completing and submitting case studies and reflective journals.</li> </ul>
Clinical Practice 4	EMC03Y4	100%	0%	8	20	<p>The purpose of this subject was to gain exposure to the real-world emergency care environment and to have opportunities to practice clinical skills related to both assessment and treatment of patients in this environment. The exposure and experiences obtained through clinical practice were important in providing the student with the contextual familiarity necessary to competently manage a broad spectrum of emergency situations and patients once qualified. In the student's final year of study, there was a great deal of emphasis on leadership (particularly in the pre-hospital environment) in addition to clinical competence.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved, specifically in the clinical learning environment:</p> <ul style="list-style-type: none"> <li>Organise and manage yourself and your activities responsibly and effectively.</li> <li>Collect, analyse, organise and critically evaluate information.</li> <li>Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation.</li> <li>Use science and technology effectively and critically, showing responsibility towards the environment and health of others.</li> <li>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.</li> <li>Reflect on and explore a variety of strategies to learn more effectively.</li> <li>Be culturally and aesthetically sensitive across a range of social contexts.</li> </ul>
Computing Literacy	CSL01A1	100%	0%	5	4	<p>The purpose of the End-User Computing course was to allow the learner to familiarise themselves with the concepts of computer technology in order to use computers effectively during their term of study at the University of Johannesburg, as well as to implement their computer knowledge in the</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>Entering Text</li> <li>Creating Documents Based on Existing Documents</li> <li>Editing Text</li> <li>Switching to Another Open Document in word</li> <li>Formatting Text</li> <li>Formatting Paragraphs</li> <li>Copying Formats</li> </ul>

					<p>workplace. All the topics in this course were geared towards the user, providing what they need to know to prepare themselves for a career. The study of the subject End-User Computing must be used to enhance all other subjects. It was an entrance level subject and the students had to extract from the course what they needed to develop further.</p>	<ul style="list-style-type: none"> <li>• Checking Spelling And Grammar</li> <li>• Previewing and Printing Documents</li> <li>• Finding and Replacing Text</li> <li>• Working With Styles</li> <li>• Working with Themes</li> <li>• Scrolling Through a Long Document</li> <li>• Working with the Document Outline</li> <li>• Changing the Margins</li> <li>• Inserting a Manual Page Break</li> <li>• Adding Page Numbers, Headers and Footers</li> <li>• Creating Citations and a List of Work Cited</li> <li>• Creating Footnotes and End notes</li> <li>• Organising Information In Tables</li> <li>• Changing the Page Orientation</li> <li>• Dividing a Document into Sections</li> <li>• Inserting and Modifying Graphics</li> <li>• Wrapping Text Around Graphics</li> <li>• Moving Graphics</li> <li>• Adding Text Effects and Word Art Text boxes</li> <li>• Working with Columns</li> <li>• Working with Building Blocks</li> <li>• Creating a Presentation</li> <li>• Rearranging Text and Slides and Deleting Slides</li> <li>• Adding Speaker Notes</li> <li>• Running a Slide Show</li> <li>• Adding Animations</li> <li>• Adding Transitions</li> <li>• Adding Footers and Headers</li> <li>• Reviewing , Previewing and Printing a Presentation</li> <li>• Working with Slide Masters</li> <li>• Inserting Graphics</li> <li>• Creating SmartArt Diagrams</li> <li>• Applying Animations to Graphics</li> <li>• Modifying Animation Timings</li> <li>• Adding Video</li> <li>• Compressing Pictures and Media</li> </ul>
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						<ul style="list-style-type: none"> <li>• Presenting Online</li> <li>• Capstone-PowerPoint: Prepare a Presentation</li> <li>• Web Applications: Working with the PowerPoint Web App</li> <li>• Understanding Spreadsheets and Excel</li> <li>• Entering and Formatting Data</li> <li>• Editing Cell Content</li> <li>• Working with Columns and Rows</li> <li>• Working with Cells and Ranges</li> <li>• Entering Simple Formulas and Functions</li> <li>• Previewing and Printing a Workbook</li> <li>• Using Relative , Absolute and Mixed Cell References in Formulas</li> <li>• Entering Functions</li> <li>• Using AutoFill</li> <li>• Working with Date Functions</li> <li>• Working with the PMT Financial Function</li> <li>• Formatting Cells and Ranges</li> <li>• Making a workbook User-Friendly</li> <li>• Using Flash Fill</li> <li>• Entering Formulas with Multiple Calculations</li> <li>• Fixing Error Values</li> <li>• Working With the IF Logical Function</li> <li>• Creating a Nested IF Function</li> <li>• Highlighting Cells with Conditional Formatting</li> <li>• Hiding Rows and Columns</li> <li>• Formatting a Worksheet for Printing</li> <li>• Creating a Chart</li> <li>• Moving and Resizing a Chart</li> <li>• Modifying a Chart</li> <li>• Creating an Exploded Pie Chart</li> <li>• Creating Column Pie Chart</li> <li>• Creating a Line Chart</li> <li>• Editing Chart Data</li> <li>• Inserting and Formatting Spark lines</li> <li>• Inserting and Modifying Data Bars</li> <li>• Capstone- Excel: Create a Budget</li> </ul>
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							<ul style="list-style-type: none"><li>• Web Applications: Working with the Excel Web App</li><li>• Understanding Database Concepts</li><li>• Creating a Database</li><li>• Working in Datasheet View</li><li>• Working with Fields and Properties in Design View</li><li>• Modifying a Table Structure</li><li>• Closing and Opening Objects and Databases</li><li>• Creating Simple Queries, Forms and Reports</li><li>• Compacting and Repairing a Database</li><li>• Maintaining Database Records</li><li>• Working with Queries in Design View</li><li>• Sorting and Filtering Data</li><li>• Defining Table Relationships</li><li>• Creating a Multitable Query</li><li>• Adding Criteria to a Query</li><li>• Creating a copy of a Query</li><li>• Adding Multiple Criteria to Queries</li><li>• Creating a Calculated Field</li><li>• Using Functions in a Query</li><li>• Creating a Form Using The Form Wizard</li><li>• Modifying a Form's Design in Layout View</li><li>• Finding Data Using a Form</li><li>• Creating a Form Based on Related Tables</li><li>• Previewing and Printing Selected Form Records</li><li>• Creating a Report Using the Report Wizard</li><li>• Modifying a Report's Design in Layout View</li><li>• Capstone-Access: Create a Database</li></ul>
Confined Space Rescue	CSR01Y4	100%	0%	8	10	This module provided the learner with the necessary knowledge and skills for incidents involving victims that need to	Throughout completion of this module, the following learning outcomes were achieved:



					<p>be searched for, and rescued from, incidents involving confined spaces. The module looked at the legislation around confined space work, detection of dangerous conditions and ventilation of confined spaces. There was also focus on the use of breathing apparatus and patient management and recovery.</p>	<ul style="list-style-type: none"> <li>• Introduction and Legislation related to confined space rescue <ul style="list-style-type: none"> <li>○ Discuss the appropriate legislation that is applicable to confined space.</li> <li>○ Discuss the value of support services that may be called to assist in the event of a confined space rescue.</li> </ul> </li> <li>• Definitions and terminology <ul style="list-style-type: none"> <li>○ Provide a definition for a “confined space”.</li> <li>○ Discuss the types of confined spaces.</li> <li>○ List and discuss the factors that contribute to the reclassification of a confined space.</li> <li>○ Identify the different components of a confined space entry permit</li> </ul> </li> <li>• Dangers associated with confined spaces <ul style="list-style-type: none"> <li>○ Discuss the natural and manmade hazards associated with incidents in caves, mines, sewers, ships and vehicles, as well as common industrial and agricultural confined spaces.</li> <li>○ List and discuss the physical hazards associated with confined spaces.</li> <li>○ Discuss the atmospheric hazards commonly found in confined spaces.</li> <li>○ Discuss the dangers associated with atmospheric gases found in confined spaces.</li> <li>○ List and discuss the properties of the critical gases that have to be tested for during the internal monitoring</li> </ul> </li> </ul>
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						<p>of a confined space.</p> <ul style="list-style-type: none"> <li>• Confined space rescue equipment</li> <li>• Discuss the characteristics, selection, uses, advantages, disadvantages and safety aspects and considerations of the following: <ul style="list-style-type: none"> <li>• Personal protective equipment</li> <li>• High angle equipment</li> <li>• Communication equipment</li> <li>• Retrieval equipment</li> <li>• Sensory equipment</li> <li>• Ventilation equipment</li> <li>• Lighting equipment</li> <li>• Patient packaging equipment <ul style="list-style-type: none"> <li>○ Discuss the principles of respiratory protection in the confined space environment</li> <li>○ Discuss and demonstrate the correct use and maintenance of respiratory protective equipment.</li> <li>○ Discuss the principles of ventilation in a confined space rescue.</li> <li>○ Classify confined space retrieval systems according to: <ul style="list-style-type: none"> <li>• Types</li> <li>• Advantages</li> <li>• Disadvantages</li> <li>• Line management</li> </ul> </li> <li>○ Critically evaluate items of equipment for serviceability.</li> </ul> </li> <li>• Confined space rescue operations <ul style="list-style-type: none"> <li>○ Discuss the different roles played by rescue personnel in a confined space rescue.</li> <li>○ Be able to function as any member of a confined space rescue team member.</li> </ul> </li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>• Compile a plan for a confined space rescue incident. <ul style="list-style-type: none"> <li>○ Discuss an effective management plan using the principles of a confined space rescue.</li> <li>○ Plan, coordinate, and execute a confined space rescue.</li> <li>○ Explain survival priorities should you become separated from your supply lines</li> </ul> </li> <li>• Practical Skills Outcomes <ul style="list-style-type: none"> <li>○ Act in a safe manner during all confined space rescue training scenarios.</li> <li>○ Correctly don and doff all PPE used for confined space rescue.</li> <li>○ Stage an area for all confined space rescue equipment during training.</li> <li>○ Fulfil the role of each member within a confined space rescue team.</li> <li>○ Correctly monitor the conditions within a confined space.</li> <li>○ Demonstrate the correct use of the following as part of a confined space rescue scenario: <ul style="list-style-type: none"> <li>• SKED stretcher</li> <li>• “Paraguard-type” stretcher</li> <li>• Tripod</li> <li>• Life lines</li> <li>• Breathing apparatus</li> <li>• Ropes</li> <li>• Patient retrieval methods <ul style="list-style-type: none"> <li>○ Assemble and operate a ventilation system.</li> <li>○ Inspect, prepare, package and store equipment.</li> <li>○ Demonstrate navigation in a confined space.</li> </ul> </li> </ul> </li> </ul> </li> </ul>
Diagnostics 1	EMC04Y2	100%	0%	6	12	The purpose of Emergency Medical	Throughout completion of this module, the following

						<p>Care Diagnostics was to provide a practical basis related to emergency medical care and pathophysiology and trauma that can be applied when interviewing and examining patients. In Diagnostics, the student learnt how to obtain information from patients which will allow him/her to focus on a chief complaint. Further questioning and clinical examination will allow the student to arrive at a list of differential diagnoses. This list will contain a subset of the diseases and disorders that the student covered in the General Pathology module. Accurate assessment, examination and integration of various signs and symptoms will assist the student in reaching possible provisional diagnoses, but also as it relates to patient care and related decision-making. The need for treatment, the type of treatment and the possible complications of treatment for any disease or disorder are impossible to determine without suspecting that disease in the first place. The Diagnostic module assisted the student in reaching these provisional diagnoses.</p>	<p>learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Patient Interaction and History Taking <ul style="list-style-type: none"> <li>○ Discuss the importance of physical examination and history taking from the perspective of the pre-hospital emergency care professional and that of the patient.</li> <li>○ Describe the elements making up a comprehensive health history.</li> <li>○ List the components of the health history.</li> <li>○ Differentiate between subjective and objective data.</li> <li>○ Explain the importance of enquiring about personal and social histories. What is meant by the term “review of systems” and what significance does this have for you as a pre-hospital practitioner.</li> <li>○ Discuss the term ‘Problem Based Approach’ and explain how this will be utilized during the patient interview.</li> <li>○ Generate pertinent questions to be used during comprehensive history taking. Provide an outline of your own personal sequence for the comprehensive examination.</li> <li>○ Explain the importance of comprehensive and accurate record keeping.</li> <li>○ Discuss the process of clinical reasoning.</li> <li>○ Explain how you would prepare for a patient interview.</li> <li>○ List the sequence for an interview and explain why it is</li> </ul> </li> </ul>
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							<p>important to keep to a set sequence.</p> <ul style="list-style-type: none"> <li>○ Discuss the seven attributes of a symptom.</li> <li>○ List and describe the various techniques a skilled interviewer may apply in order to obtain a full and accurate history from different groups / types of patients.</li> <li>○ Fully discuss the issue of language barriers and the importance of cultural competence.</li> </ul> <ul style="list-style-type: none"> <li>● General Survey and Vital Signs <ul style="list-style-type: none"> <li>○ Discuss the importance of assessing the patient's Body Mass and demonstrate how to calculate the BMI for a patient.</li> <li>○ Explain how you as a practitioner would go about preparing to examine a patient.</li> <li>○ List the components making up a general survey.</li> <li>○ List and discuss the measurement of vital signs.</li> <li>○ Demonstrate the assessment of vital signs.</li> </ul> </li> <li>● Skin, Hair and Nails <ul style="list-style-type: none"> <li>○ List the changes that are normally associated with aging.</li> <li>○ Describe the common skin lesions that are associated with aging.</li> <li>○ List the common causes for generalized itching without an obvious reason.</li> <li>○ Explain the (SPF) system for grading protective sunscreens.</li> </ul> </li> </ul>
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						<p>their clinical significance:</p> <ul style="list-style-type: none"> <li>○ Mee's lines</li> <li>○ Beau's lines</li> <li>○ Terry's nails</li> <li>○ Clubbing</li> <li>○ Describe the features you would assess during examination of the patient's skin.</li> <li>○ Discuss and demonstrate the important areas of examination of the skin, hair and nails</li> </ul> <ul style="list-style-type: none"> <li>• Head and Neck <ul style="list-style-type: none"> <li>○ Describe how you would examine the structures in the head and neck region.</li> <li>○ Explain what type of questions you could ask to try and establish a possible cause for headaches.</li> <li>○ Provide a simple explanation of what the following terms mean: <ul style="list-style-type: none"> <li>○ Tinnitus</li> <li>○ Diplopia</li> <li>○ Scotomas</li> <li>○ Vitreous floaters</li> <li>○ Myopia</li> <li>○ Presbyopia</li> <li>○ Graves' disease</li> <li>○ Mydriasis</li> <li>○ Tonic pupils</li> <li>○ Ptosis</li> <li>○ Nystagmus</li> <li>○ "Tug test"</li> </ul> </li> <li>○ Explain how you would go about examining the optic disc and retina.</li> <li>○ Explain how you would go about assessing and recording visual acuity using a Snellen chart.</li> <li>○ Describe the effect that hypertension and diabetes may have on the normal retinal structures.</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>○ Explain normal “near reaction”.</li> <li>○ Explain in a logical sequence how you would go about using an ophthalmoscope to examine the eye of a seated patient.</li> <li>○ Explain the difference between a sensory neural hearing loss and a conductive hearing loss.</li> <li>○ Discuss abnormalities you may note in the head and neck region which may be associated with thyroid disorders.</li> <li>○ Explain how you could clinically differentiate between a right nerve VI, IV and III paralysis.</li> <li>○ Describe and explain the clinical significance of a tophus.</li> <li>○ Explain the pathophysiology behind a serous effusion seen when examining the eardrum.</li> <li>○ How would you differentiate between otitis media and otitis externa?</li> <li>○ Discuss how a patient with tonsillitis could present.</li> <li>○ Discuss the significance of detecting a retinal detachment.</li> <li>○ List the common forms of cancer which are associated with the head and neck region and structures.</li> <li>○ Discuss and demonstrate the important areas of examination of the head and neck</li> </ul> <ul style="list-style-type: none"> <li>• Thorax and Lungs <ul style="list-style-type: none"> <li>○ List the common concerning</li> </ul> </li> </ul>
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						<p>symptoms that you may elicit during a health history of the thorax and lungs.</p> <ul style="list-style-type: none"> <li>○ Discuss the likely causes of chest pain and how investigating the type of pain may allow you to diagnose the possible cause.</li> <li>○ Explain how you would go about investigating a complaint of dyspnoea, coughing and haemoptysis.</li> <li>○ Explain how you would differentiate between the following disorders all of which may result in a complaint of pain in the chest: <ul style="list-style-type: none"> <li>○ Angina pectoris</li> <li>○ Myocardial infarction</li> <li>○ Pericarditis</li> <li>○ Dissecting aortic aneurysm</li> <li>○ Tracheo bronchitis</li> <li>○ Pleural pain</li> <li>○ Reflex oesophagitis</li> <li>○ Diffuse oesophageal spasm</li> <li>○ Chest wall pain</li> <li>○ Anxiety</li> </ul> </li> <li>○ Explain how you would differentiate between the following disorders all of which may result in a complaint of dyspnoea: <ul style="list-style-type: none"> <li>○ Laryngitis</li> <li>○ Tracheobronchitis</li> <li>○ Mycoplasma and viral pneumonias</li> <li>○ Bacterial pneumonias</li> <li>○ Post nasal drip</li> <li>○ Chronic bronchitis</li> <li>○ Bronchiectasis</li> <li>○ Pulmonary tuberculosis</li> <li>○ Lung abscess</li> <li>○ Asthma</li> <li>○ Gastric reflux</li> <li>○ Neoplasm / cancer of the lung</li> <li>○ LVF / mitral stenosis</li> <li>○ Pulmonary emboli</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>○ Inhaled irritants</li> <li>○ Discuss the various lung sounds and their causes.</li> <li>○ Discuss and demonstrate the important areas of examination of the thorax and lungs.</li> </ul> <ul style="list-style-type: none"> <li>● Cardiovascular System           <ul style="list-style-type: none"> <li>○ Discuss and describe the anatomy and physiology of the cardiovascular system.</li> <li>○ Discuss events in the cardiac cycle with reference to the heart sounds heard on auscultation.</li> <li>○ Explain the phenomenon of splitting of the heart sounds.</li> <li>○ Explain how you would measure jugular venous pressure as well as its significance to you as a practitioner.</li> <li>○ Mention the common cardiovascular changes that are associated with aging.</li> <li>○ Discuss the common symptoms that patients will complain of and which relate to cardiovascular disorders.</li> <li>○ Discuss the important topics you would cover in health promotion and counselling for patients with a family history of cardiovascular disease.</li> <li>○ Explain in a chronological sequence how you would go about assessing the</li> </ul> </li> </ul>
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							<p>cardiovascular status of a patient.</p> <ul style="list-style-type: none"> <li>• Breast and Axilla <ul style="list-style-type: none"> <li>○ Discuss and describe the anatomy and physiology of the female breast.</li> <li>○ Explain the common or concerning symptoms patients may complain of and which are associated with the breast.</li> <li>○ Discuss the issue of breast cancer and the importance of screening.</li> <li>○ Talking about and examining a women's breasts may elicit feelings of embarrassment for the patient and / or inexperienced practitioner; explain how you would manage this.</li> <li>○ Discuss and describe the anatomy and physiological changes of the female during pregnancy.</li> <li>○ Explain the common or concerning symptoms patients may complain of and which are associated with pregnancy.</li> <li>○ Discuss the techniques of examination of a pregnant female</li> <li>○ Explain how you assess the foetal heart rhythm and what is the importance of this during the trimesters</li> <li>○ Talking about and examining a pregnant female may elicit feelings of embarrassment for the patient and / or</li> </ul> </li> </ul>
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						<p>inexperienced practitioner; explain how you would manage this.</p> <ul style="list-style-type: none"> <li>• The Abdomen <ul style="list-style-type: none"> <li>○ List the common or concerning symptoms that patients may complain about which relate to the gastrointestinal, urinary and / or renal systems.</li> <li>○ Apply knowledge of the pathophysiology, signs and symptoms of the following common disorder in order to differentiate between them: <ul style="list-style-type: none"> <li>○ Peptic Ulcers and dyspepsia</li> <li>○ Cancer of the stomach</li> <li>○ Acute Pancreatitis</li> <li>○ Chronic Pancreatitis</li> <li>○ Cancer of the Pancreas</li> <li>○ Biliary Colic</li> <li>○ Acute Cholecystitis</li> <li>○ Acute Diverticulitis</li> <li>○ Acute appendicitis</li> <li>○ Intestinal obstruction</li> <li>○ Mesenteric Ischemia</li> </ul> </li> <li>○ Apply knowledge of the pathophysiology, signs and symptoms of the following common disorder resulting in dysphagia in order to differentiate between them.</li> <li>○ Classify diarrhoea according to the origin being secretory or inflammatory in nature.</li> <li>○ Discuss the possible causes for black or bloody stools, the corresponding pathophysiology including the signs and symptoms.</li> <li>○ Discuss and demonstrate the</li> </ul> </li> </ul>
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						<p>important areas of examination of the abdomen</p> <ul style="list-style-type: none"> <li>• The Male Genitalia and Hernias <ul style="list-style-type: none"> <li>○ Discuss the common symptoms patient may present with relating to the male genitalia.</li> <li>○ Describe the technique for examining the penis.</li> <li>○ Students and patients may feel uneasy about examining the penis; explain how you would deal with this.</li> <li>○ Explain how a hernia may form.</li> </ul> </li> <li>• The Female Genitalia <ul style="list-style-type: none"> <li>○ Describe the normal female anatomy of this region.</li> <li>○ Explain what changes may occur with aging.</li> <li>○ List the common and concerning symptoms a patient may present with relating to the female genitalia.</li> <li>○ Discuss health promotion and counselling relating to the female genitalia.</li> <li>○ List and describe the important areas that should be examined.</li> <li>○ Discuss how you may deal with the possible difficulty in managing this type of examination, particularly from a patient-practitioner communication point of view.</li> </ul> </li> <li>• The Anus, Rectum and Prostate</li> </ul>
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						<ul style="list-style-type: none"> <li>○ Describe the changes that may occur with aging</li> <li>○ List and explain the common or concerning symptoms patients may present with</li> <li>○ Discuss the issue of prostate cancer with reference to the pathophysiology as well as screening</li> </ul> <ul style="list-style-type: none"> <li>• The Older Adult <ul style="list-style-type: none"> <li>○ Discuss the changes occurring during aging in the Anatomy and Physiology of the aging adult.</li> <li>○ Discuss the changes in the approach to this patient during the history taking and the physical assessment</li> <li>○ Discuss the special areas of concern when assessing common or concerning symptoms in the aging patient.</li> <li>○ Discuss the importance of health promotion and counselling in the aging patient.</li> <li>○ Discuss how your techniques of examination should be adapted in the case of the examination of an aging patient.</li> </ul> </li> <li>• The Peripheral vascular System <ul style="list-style-type: none"> <li>○ List and discuss the common concerning symptoms patients may present with relating to the peripheral vascular system.</li> <li>○ Discuss the presentation and pathology of peripheral artery disease.</li> <li>○ Explain methods of recording and</li> </ul> </li> </ul>
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							<p>documenting findings relating to a peripheral vascular examination.</p> <ul style="list-style-type: none"> <li>○ Diagnose and differentiate between the various peripheral vascular disorders, specifically those that may create pain.</li> <li>○ Discuss the difference between chronic venous and chronic arterial insufficiency by making mention of:</li> <li>○ Symptoms</li> <li>○ Presentation</li> <li>○ Mechanism</li> <li>○ Discuss and demonstrate the important areas of examination of the peripheral vascular system</li> </ul> <ul style="list-style-type: none"> <li>• The Musculo-Skeletal System <ul style="list-style-type: none"> <li>○ Discuss the common concerning symptoms that patients may present with relating to muscular skeletal disorders.</li> <li>○ Discuss health promotion and counselling for the musculo-skeletal system.</li> <li>○ Explain the changes typically associated with aging.</li> <li>○ Explain what signs and symptoms are associated with the common disorders that create pain in and around the spine and joints.</li> <li>○ Discuss and demonstrate the important areas of examination of the musculoskeletal system</li> </ul> </li> </ul>
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Disaster Management	DIS01Y4	100%	0%	7	4	<p>The purpose of this module was to teach the student about, and ensure competence in, the following components of disaster management:</p> <ul style="list-style-type: none"> <li>• Introduction to disaster</li> </ul>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>○ Demonstrate an understanding of the various role players and legislation pertaining to disaster</li> </ul>



						<p>management in South Africa</p> <ul style="list-style-type: none"> <li>• Risk of disasters</li> <li>• Apathy towards disasters</li> <li>• Planning for disasters</li> <li>• Different types of disaster situations</li> <li>• Communication during disasters</li> <li>• Resource management</li> <li>• Incident command systems</li> <li>• Triage</li> <li>• Public and media management</li> </ul>	<p>management in South Africa.</p> <ul style="list-style-type: none"> <li>• RISKS OF DISASTERS <ul style="list-style-type: none"> <li>○ Discuss the reasons for the increase in the risk of disasters.</li> <li>○ Explain some of the methods that can be used to gain accurate information about past disasters.</li> </ul> </li> <li>• APATHY TOWARDS DISASTERS <ul style="list-style-type: none"> <li>○ Discuss the reasons for public and governmental apathy towards disasters.</li> <li>○ Explain why it is important to plan for what is likely to occur in a disaster situation.</li> <li>○ Explain the relevance of designing a disaster plan that can be utilized in routine emergencies.</li> <li>○ Discuss various methods that may be used to reduce apathy towards disasters.</li> </ul> </li> <li>• PLANNING FOR DISASTERS <ul style="list-style-type: none"> <li>○ Discuss why it is important for training to accompany a disaster plan.</li> <li>○ Discuss the principles that must be considered in preparing a disaster plan.</li> <li>○ Discuss the functions of a disaster planning committee.</li> </ul> </li> </ul>
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Educational Techniques	EDT01Y4	100%	0%	8	6	Education and the study thereof is concerned with understanding development of people and how they learn throughout their lives. This subject was aimed at providing learners with the skills and knowledge required to effectively teach others.	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• To plan, design, develop, implement, deliver and assess EMS related learning activities (both theory and practical skills teaching) in both classroom and authentic learning environments</li> <li>• Demonstrate honest and insightful self-reflective assessment</li> </ul>

						<p>on your performance, and be able to incorporate this into their teaching;</p> <ul style="list-style-type: none"> <li>• Receive and give consistent positive feedback on formative and summative teaching activities.</li> <li>• Establish the value and methods of continued reflection on professional practice.</li> <li>• Establish the sharing of good practice, commitment to team work and search for continuous improvement in teaching and training.</li> <li>• Demonstrate effective educational communication to students.</li> <li>• Identify and evaluate theories, principles and methods of teaching and learning.</li> <li>• To demonstrate an understanding of how learners learn, the impact of individual differences, ways to assist the development of their responsibility for their own learning and professional competence.</li> <li>• Develop and implement education and training in the context of EMC&amp;R.</li> <li>• Acquire skills as learning programme designers, educators, facilitators of learning, training and assessors, in the context of translating an understanding of educational theories into relevant learning experience in the field of EMC&amp;R.</li> <li>• Establish the value and methods of continued reflection on professional practice, including the commitment to team working, searching for continuous improvement in teaching</li> </ul>
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							<p>and training, and sharing of good practice.</p> <ul style="list-style-type: none"> <li>• Demonstrate effective educational communication.</li> <li>• Identify and evaluate the underlying theories, principles and methods of teaching and learning.</li> <li>• Demonstrate that you are competent in the design, implementation and evaluation of specific teaching and training programmes associated with Emergency Medical Care;</li> <li>• Identify educational resources and design suitable materials to deliver learning programmes.</li> <li>• Plan, conduct and moderate assessment and RPL.</li> <li>• Develop and apply quality assurance to programmes.</li> <li>• Demonstrate skills in verbal and non-verbal communication in an educational context.</li> </ul>
Emergency Medical Care 1 Practical	EMC02Y1	100%	0%	5	12	<p>The purpose of studying Emergency Medical Care I was that the student developed and demonstrated the following practical, foundational and reflective outcomes on the culmination of their learning activities:</p> <ul style="list-style-type: none"> <li>• Manage the pre-hospital emergency scene and patient, solve clinical problems and apply theoretical understanding of emergency medical care in the effective assessment and treatment of medical emergencies at an introductory level and with</li> </ul>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• The need for an ordered, sequential approach to the emergency situation is clearly substantiated.</li> <li>• Steps of the primary and secondary surveys are named and arranged in the correct sequence.</li> <li>• Each step previously defined is explained and any immediate emergency care necessary is described.</li> <li>• The common causes of airway obstruction in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant respiratory emergencies are named and management</li> </ul>

						<p>reference to the specific systems and disorders included in Emergency Medical Care I.</p> <ul style="list-style-type: none"> <li>• Justify all interventions and omissions related to pre-hospital emergency patient and scene assessment and treatment based on application of theoretical principles of patient and scene assessment, disease processes and Emergency Medical Service systems.</li> <li>• Innovate and apply knowledge in new contexts as well as make decisions, think strategically, organise and work effectively as part of a team.</li> </ul>	<p>strategies are described.</p> <ul style="list-style-type: none"> <li>• Management of the listed medical emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of cardiovascular illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant cardiovascular emergencies are named and management strategies are described.</li> <li>• Management of the listed cardiovascular emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of central nervous system illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant central nervous system emergencies are named and management strategies are described.</li> <li>• Management of the listed central nervous system emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of endocrine illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the</li> </ul>
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						<p>relevant endocrine emergencies are named and management strategies are described.</p> <ul style="list-style-type: none"> <li>• Management of the listed endocrine emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of skin and soft tissue illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant skin and soft tissue emergencies are named and management strategies are described.</li> <li>• Management of the listed skin and soft tissue emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of musculoskeletal illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant musculoskeletal emergencies are named and management strategies are described.</li> <li>• Management of the listed musculoskeletal emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of gastrointestinal tract and urogenital illness and injury in both trauma and non-trauma emergencies are named</li> </ul>
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						<p>and management strategies are described.</p> <ul style="list-style-type: none"> <li>• The common pathophysiology of the relevant gastrointestinal tract and urogenital emergencies are named and management strategies are described.</li> <li>• Management of the listed gastrointestinal tract and urogenital emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of obstetrics and gynaecological illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant obstetrics and gynaecological emergencies are named and management strategies are described.</li> <li>• Management of the listed obstetrics and gynaecological emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of poisoning emergencies and relevant bites and stings are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant poisoning emergencies and relevant bites and stings are named and management strategies are described.</li> </ul> <p>Management of the listed poisoning emergencies and relevant bites and stings are described and appropriate strategies are related to</p>
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							current best practice.
Emergency Medical Care 1 Theory	EMC01Y1	100%	0%	5	24	<p>The purpose of studying Emergency Medical Care I was that the student developed and demonstrated a number of practical, foundational and reflective outcomes on the culmination of their learning activities. Although this was a theoretical module, it was intimately linked to both the practical and clinical practice modules, therefore, this module focussed on the theoretical components required for the student to:</p> <ul style="list-style-type: none"> <li>• Manage the pre-hospital emergency scene and patient, solve clinical problems and apply theoretical understanding of emergency medical care in the effective assessment and treatment of medical emergencies at an introductory level and with reference to the specific systems and disorders included in Emergency Medical Care I.</li> <li>• Justify all interventions and omissions related to pre-hospital emergency patient and scene assessment and treatment based on application of theoretical principles of patient and scene assessment, disease processes and Emergency</li> </ul>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• The need for an ordered, sequential approach to the emergency situation is clearly substantiated.</li> <li>• Steps of the primary and secondary surveys are named and arranged in the correct sequence.</li> <li>• Each step previously defined is explained and any immediate emergency care necessary is described.</li> <li>• The common causes of airway obstruction in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant respiratory emergencies are named and management strategies are described.</li> <li>• Management of the listed medical emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of cardiovascular illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant cardiovascular emergencies are named and management strategies are described.</li> <li>• Management of the listed cardiovascular emergencies are described and appropriate strategies are related to current best practice.</li> </ul>

						<p>Medical Service systems as detailed within the module Emergency Medical Care I.</p> <ul style="list-style-type: none"> <li>• Innovate and apply knowledge in new contexts as well as make decisions, think strategically, organise and work effectively as part of a team as detailed within the module Emergency Medical Care I.</li> </ul>	<ul style="list-style-type: none"> <li>• The common causes of central nervous system illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant central nervous system emergencies are named and management strategies are described.</li> <li>• Management of the listed central nervous system emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of endocrine illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant endocrine emergencies are named and management strategies are described.</li> <li>• Management of the listed endocrine emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of skin and soft tissue illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant skin and soft tissue emergencies are named and management strategies are described.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Management of the listed skin and soft tissue emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of musculoskeletal illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant musculoskeletal emergencies are named and management strategies are described.</li> <li>• Management of the listed musculoskeletal emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of gastrointestinal tract and urogenital illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant gastrointestinal tract and urogenital emergencies are named and management strategies are described.</li> <li>• Management of the listed gastrointestinal tract and urogenital emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of obstetrics and gynaecological illness and injury in both trauma and non-trauma emergencies are named and management strategies are described.</li> </ul>
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							<p>strategies are described.</p> <ul style="list-style-type: none"> <li>• The common pathophysiology of the relevant obstetrics and gynaecological emergencies are named and management strategies are described.</li> <li>• Management of the listed obstetrics and gynaecological emergencies are described and appropriate strategies are related to current best practice.</li> <li>• The common causes of poisoning emergencies and relevant bites and stings are named and management strategies are described.</li> <li>• The common pathophysiology of the relevant poisoning emergencies and relevant bites and stings are named and management strategies are described.</li> <li>• Management of the listed poisoning emergencies and relevant bites and stings are described and appropriate strategies are related to current best practice.</li> </ul>
Emergency Medical Care 2 Practical	EMC02Y2	100%	0%	6	6	<p>The Emergency Medical Care II Practical Module dealt with practical application of theoretical knowledge and understanding of emergency medical care practice in the acute pre-hospital and casualty settings. On completion the student should be able to integrate their understanding of anatomy, physiology, pathology and professional practice to patient care in order to manage simple cases. This module also aimed to</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Advanced Airway management <ul style="list-style-type: none"> <li>○ Perform an adequate airway assessment including predictors of difficulty for BVM ventilation, Laryngoscope, EGD placement and ventilation and SCT.</li> <li>○ Perform an Oral Endotracheal intubation</li> <li>○ Perform an Oral Endotracheal intubation with the use of a bougie</li> </ul> </li> </ul>

					<p>equip the student with the ability to confidently and professionally interact with patients, make accurate diagnoses and to start to make sound clinical judgments that informs and validates decisions regarding patient care and treatment.</p>	<ul style="list-style-type: none"> <li>○ Perform an Oral Endotracheal intubation with the use of an introducer, stylet or a Magill's forceps.</li> <li>○ Perform an Oral Endotracheal intubation with the use of an alternative intubating device, such as an Airtraq optical laryngoscope or video laryngoscope</li> <li>○ Confirm the placement of a ETT using any or all of the following: Coloumetric device, EDD, Capnometry and Capnography</li> <li>○ Perform the placement of various Extra Glottic Devices, at least the following: <ul style="list-style-type: none"> <li>▪ King LT</li> <li>▪ An orotracheal-oesophageal double lumen airway (Combitube®)</li> <li>▪ Laryngeal Mask Airway (especially LMA Fastrach™)</li> </ul> </li> <li>○ Perform the procedure of Tracheobronchial suctioning</li> <li>● Capnography <ul style="list-style-type: none"> <li>○ Correctly connect a colourimetric capnometric device to: <ul style="list-style-type: none"> <li>▪ An endotracheal tube</li> <li>▪ A bag-valve resuscitator</li> <li>▪ An extraglottic airway device</li> <li>▪ An oesophageal-tracheal tube (Combitube)</li> </ul> </li> </ul> </li> </ul>
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							<p>adult vagina and urinary system.</p> <ul style="list-style-type: none"> <li>○ Adequately clean and disinfect applicable areas prior to catheterisation.</li> <li>○ Manage the sterile area using the correct techniques and methods.</li> <li>○ Correctly pass a urinary catheter into an adult female patient.</li> <li>○ Correctly pass a urinary catheter into an adult male patient.</li> <li>○ Secure the urinary catheter using the correct techniques to both an adult male and female.</li> <li>○ Connect a urine bag to a catheter.</li> <li>○ Monitor the urine output but identifying the volume and colour.</li> </ul> <ul style="list-style-type: none"> <li>● Gastric catheterization <ul style="list-style-type: none"> <li>○ Correctly identify the anatomy of the nose, mouth, oropharynx and nasopharynx.</li> <li>○ Adequately maintain sterility of equipment used for gastric catheterization.</li> <li>○ Correctly pass a naso-gastric catheter in an adult patient.</li> <li>○ Correctly pass an oro-gastric catheter in an adult patient.</li> <li>○ Secure the gastric catheter using the correct techniques an adult patient.</li> <li>○ Connect a urine bag to the catheter.</li> </ul> </li> <li>● Patient simulation assessment <ul style="list-style-type: none"> <li>○ On completion of this study unit and by completing the learning tasks, the student should be able to confidently and professionally interact with patients, assess</li> </ul> </li> </ul>
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							<p>patients comprehensively, make accurate diagnoses and make sound clinical judgments that informs and validates decisions regarding patient care and treatment in the simulated environment.</p>
Emergency Medical Care 2 Theory	EMC01Y2	100%	0%	6	12	<p>The Emergency Medical Care II Theory Module dealt with theoretical knowledge and principles that underpin the provision of medical care in the acute pre-hospital and emergency department settings. On completion, the student should be able to answer reasonably complex questions regarding the science that underpin pre-hospital emergency care. The student should also start to integrate principles of anatomy, physiology, pathology, diagnostics and professional practice to patient care. This module also aimed to equip the student with the knowledge of how to confidently and professionally interact with patients, make accurate diagnoses and sound clinical judgments that informs and validates decisions regarding patient care and treatment.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Airway management <ul style="list-style-type: none"> <li>◦ Discuss airway-related anatomy and physiology that is vital in acute care of adult patients.</li> </ul> </li> <li>• List and elaborate on the four main categories of indications for endotracheal intubation.</li> <li>• Discuss the need for non-invasive manoeuvres to maintain oxygenation and ventilation</li> <li>• Describe the importance of pre-oxygenation prior to endotracheal intubation.</li> <li>• List the clinical features that may indicate a patient is in respiratory failure.</li> <li>• Discuss the adaptation of Salkes' triangle when deciding to intubate a patient.</li> <li>• How can presenting system physiology in the adult patient have an effect on determining the correct course of action when deciding to intubate. (i.e.: hypotension)</li> <li>• Differentiate between the objective and subjective methods of confirmation of ETT placement or location.</li> <li>• Compare the effectiveness of each of the devices used to confirm ETT</li> </ul>

						<p>placement.</p> <ul style="list-style-type: none"> <li>Identify the potential complications that are associated with the commercial and non-commercial equipment used to secure an endotracheal tube</li> <li>Provide an overview of the various filtration devices that can be attached to the ETT.</li> <li>Discuss the effects of bag-valve-tube-resuscitator (BVTR) ventilation and identify potential complications that may occur during the procedure.</li> <li>Explain the importance of non-invasive blood pressure (NiBP) monitoring pre- and post-intubation.</li> <li>Identify and describe all the potential complications of endotracheal intubation.</li> <li>Discuss the circumstances in which a patient may benefit from trachea-bronchial suctioning within the pre-hospital setting.</li> <li>List and briefly explain the pathophysiology of each of the potential complications associated with trachea-bronchial suctioning.</li> <li>Discuss the issue of sterility associated with performance of trachea-bronchial suctioning.</li> <li>Differentiate between a 'difficult airway' and a 'failed airway' and elaborate on each of the components under each definition.</li> <li>What are the dangers associated with multiple intubation attempts?</li> <li>Elaborate on the various components of the 'encountered difficult airway' algorithm.</li> </ul>
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							<p>causes of a failed needle thoracentesis.</p> <ul style="list-style-type: none"> <li>• Beta-2 therapy and peak flow meter <ul style="list-style-type: none"> <li>○ Review the anatomical structures of the lower airway. Review of respiratory dynamics and how they relate to the various described volumes.(predicted weight-based volumes)</li> </ul> </li> <li>• An understanding of pathophysiology, clinical signs and diagnosis relating to the lower airway diseases: <ul style="list-style-type: none"> <li>○ Bronchoconstriction</li> <li>○ Bronchospasm</li> <li>○ COPD</li> <li>○ Bronchoedema</li> <li>○ Decreased ciliary action</li> <li>○ Mucous plugging</li> </ul> </li> <li>• Discuss the use of the PEAK flow as an adjunct to the management of lower airway diseases. Interpretation of the results from the PEAK flow reading.</li> <li>• Review the pharmacological action, indications,</li> <li>• contraindications and adverse effects of beta-2 adrenergic stimulants.</li> <li>• Intravenous therapy and fluid management <ul style="list-style-type: none"> <li>○ Review the physiology of fluids and electrolytes and describe their movement within the various bodily compartments.</li> </ul> </li> <li>• Discuss, categorise and/or differentiate between the various intravenous fluids commonly used in the emergency and critical care setting using the following headings: <ul style="list-style-type: none"> <li>○ Generic classes and/or trade names</li> <li>○ Molecular structure and constituents</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>○ Tonicity and osmotic potential in relation to blood and tissue fluids</li> <li>○ Indications and dosages</li> <li>○ Metabolism, elimination and intra-vascular half-life</li> <li>○ Contraindications, precautions and/or potential side effects.</li> <li>• Identify the indications for the establishment of intravenous access and the choice of fluid and administration set.</li> <li>• Describe the potential complications that may be associated with intravenous cannulation and the administration of fluid.</li> <li>• Discuss the physiological indicators that you would use to decide whether or not an infused volume of fluid is adequate for the patient's presenting condition.</li> <li>• Describe the strategies and end points of fluid resuscitation in the following categories of shock: <ul style="list-style-type: none"> <li>○ Cardiogenic</li> <li>○ Haemorrhagic</li> <li>○ Inflammatory (toxic and septic)</li> </ul> </li> <li>• Identify the indications, contra-indications and complications of the pneumatic anti-shock garment.</li> <li>• Relate the use of the PASG as an adjunct for the treatment of specific forms of shock.</li> <li>• Electrocardiographic interpretation <ul style="list-style-type: none"> <li>○ Review of electrophysiology and the electroconductive system of the myocardium</li> </ul> </li> <li>• Review of waveforms and features of the normal electrocardiogram and the clinical correlation</li> <li>• Basic concepts of arrhythmia <ul style="list-style-type: none"> <li>○ recognition</li> <li>○ Artefact</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Mild hypothermia</li> <li>▪ Moderate hypothermia</li> <li>▪ Severe hypothermia</li> <li>▪ Frostbite</li> <li>○ explain the phenomenon of wind chill.</li> <li>• Submersion emergencies <ul style="list-style-type: none"> <li>○ Explain the pathophysiology of drowning</li> <li>○ Discuss the factors that may affect the clinical outcome and prognosis of the patient who has been submerged</li> <li>○ Explain how you would manage a patient that has been submerged</li> </ul> </li> <li>• Blasts and Ballistics <ul style="list-style-type: none"> <li>○ Explain the meaning of the term cavitation as it applies to gunshot wounds and penetrating trauma and identify the relevance that it has to a practitioner</li> <li>○ Describe the factors that affect the type of injury and the amount of damage caused by the bullet</li> <li>○ Discuss the management of a patient who has sustained a gunshot wound and the effect the injury has on various bodily systems.</li> </ul> </li> <li>• Toxicology <ul style="list-style-type: none"> <li>○ Provide an adequate definition for toxicology.</li> <li>○ Describe the routes of exposure that a toxin may enter the body.</li> <li>○ Consider the important items that will need to be addressed when taking a targeted history for the poisoned patient.</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>○ Relate the clinical findings, during the examination of the poisoned patient, to the recognised toxidromes to assist with the diagnosis.</li> <li>○ Discuss the general treatment principles of the following toxins: <ul style="list-style-type: none"> <li>➤ Alcohol</li> <li>➤ Heroin and Opioids</li> <li>➤ Cocaine and stimulants</li> <li>➤ Benzodiazepines and sedatives</li> <li>➤ Acetyl salicylic acid</li> <li>➤ Paracetamol</li> <li>➤ Tricyclic Antidepressants</li> <li>➤ Calcium Channel and Beta-blockers</li> <li>➤ Organophosphates</li> <li>➤ Carbon Monoxide</li> </ul> </li> <li>○ Discuss the available resources where you can get information on toxins.</li> <li>○ Provide an overview of substance abuse in patients dependent on licit and illicit drugs and alcohol.</li> <li>• Behavioural emergencies</li> <li>• Explain when abnormal behaviour requires medical intervention and discuss the medico-legal implications as depicted by the Mental Health Act of South Africa.</li> <li>• Describe the causes of abnormal behaviour under <ul style="list-style-type: none"> <li>▪ the following headings: <ul style="list-style-type: none"> <li>➤ Biological/organic</li> <li>➤ Psychosocial</li> <li>➤ Sociocultural</li> <li>➤ Psychopathology</li> </ul> </li> </ul> </li> <li>• Classify psychiatric signs and symptoms to the various behavioural disorders.</li> </ul>
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						<ul style="list-style-type: none"> <li>Describe the general principles of assessment and management of a demonstrating abnormal behaviour.</li> <li>Demonstrate an understanding of the following disorders: <ul style="list-style-type: none"> <li>Anxiety disorders</li> <li>Mood disorders</li> <li>Personality disorders</li> <li>Eating, impulse control and substance-related disorders</li> <li>Psychosis</li> </ul> </li> <li>Describe your approach to hostile and violent patients and discuss the difference between physical and chemical restraint.</li> </ul>
Emergency Medical Care 3 Practical	EMC02Y3	100%	0%	7	12	<p>The aim of Emergency Medical Care – Practical was to provide the student with the opportunity to practice how to manage patients suffering from injuries and illnesses in a controlled, safe environment. During this module, the student had the opportunity to practice how to integrate all of the theoretical aspect and underpinnings of emergency care into actually managing patients. Simply put, this allowed the student to move from knowing what to do, to practicing how to do it.</p> <p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>Successful performance of the following procedures: <ul style="list-style-type: none"> <li>➤ Visual nasal intubation</li> <li>➤ Oral endotracheal intubation with induction</li> <li>➤ Bag-valve-tube nebulization</li> <li>➤ Upper airway obstruction with the use of equipment</li> <li>➤ Needle cricothyroidotomy</li> <li>➤ Surgical cricothyroidotomy</li> <li>➤ Nasogastric intubation</li> <li>➤ Orogastric intubation</li> <li>➤ The use of a transport ventilator in the pre-hospital environment for primary response</li> <li>➤ Vagal maneuvers</li> <li>➤ Synchronized Cardioversion</li> <li>➤ Transcutaneous pacing</li> <li>➤ Intra-osseous cannulation</li> <li>➤ External jugular vein cannulation</li> </ul> </li> </ul>

							<ul style="list-style-type: none"> <li>➤ Femoral vein cannulation</li> <li>➤ Drug administration – intramuscular</li> <li>➤ Drug administration – intravenous</li> <li>➤ Drug infusion preparation</li> <li>➤ Management of a prolapsed cord</li> <li>• Demonstrate procedural competence in performing a Rapid Sequence Intubation.</li> <li>• Demonstrate correct application of RSI and difficult airway algorithms and protocols using adult and paediatric patient simulators in a scenario based environment</li> <li>• Demonstrate rapid and accurate airway assessment on patients using adult and paediatric patient simulators in a scenario based environment</li> <li>• Assemble and set up equipment and prepare a patient for RSI using adult and paediatric patient simulators in a scenario based environment</li> <li>• Select the appropriate induction and neuromuscular blocking agents in a simulated environment</li> <li>• Perform a rapid sequence of induction, neuromuscular blockade and endotracheal intubation in a simulation assessment.</li> <li>• Demonstrate rapid and accurate assessment of endotracheal tube placement post-intubation using adult and paediatric patient simulators in a scenario based environment</li> <li>• Manage a patient appropriately post-RSI with regard to securing of the endotracheal tube, management of post-intubation hypotension, longer</li> </ul>
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							<p>term sedation and neuromuscular blockade using adult and paediatric patient simulators in a scenario based environment.</p> <ul style="list-style-type: none"> <li>• Document accurately all clinical and event data relevant to an RSI performed using adult and paediatric patient simulators in a scenario based environment</li> <li>• Manage simulated adult patients suffering from a variety of injuries and illnesses commonly found in the pre-hospital setting to an Emergency Care Practitioner scope of practice</li> <li>• Correctly select and utilize the emergency medical equipment in the patient simulations.</li> <li>• Demonstrate an ability to communicate with patients and crew in a professional and ethical manner during the patient simulations.</li> <li>• Correctly assess, diagnose and manage patients suffering from injuries and illnesses commonly found in the pre-hospital setting according to your scope of practice.</li> </ul>
Emergency Medical Care 3 Theory	EMC01Y3	100%	0%	7	12	<p>Emergency Medical Care III is considered to be one of the core modules in the EMC programme. This was the module where the student got the opportunity to apply all of the knowledge and skills gained from the first two years of academic experiences into the management of adult patients. The student should be competent to manage any adult patient to the same extent of a qualified ECP by the end of this year. The aim of Emergency Medical</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• List and explain the indications and contraindications for a needle cricothyroidotomy.</li> <li>• Discuss the advantages and disadvantages that are associated with needle cricothyroidotomy.</li> <li>• Describe the complications associated with performing this skill.</li> <li>• List and explain how you would prepare and inspect the equipment needed to perform a</li> </ul>

					<p>Care – Theory was to provide the student with the contextual knowledge and content that they should use to guide decision making when dealing with patients. The bulk of the work in this module was putting concepts learnt in Anatomy, Physiology, Diagnostics, General Pathology, EMC II and Pharmacology together and then applying this existing knowledge and understanding to properly assess, diagnose, and treat ill and injured patients.</p>	<p>needle cricothyroidotomy.</p> <ul style="list-style-type: none"> <li>• Explain in detail the limitations associated with a needle cricothyroidotomy specifically in adult patient.</li> <li>• Discuss the different ways to overcome these limitations.</li> <li>• List and explain the indications and contraindications for a surgical cricothyroidotomy.</li> <li>• Discuss the advantages and disadvantages that are associated with a surgical cricothyroidotomy.</li> <li>• Describe the complications associated with performing this skill.</li> <li>• List and explain how you would prepare and inspect the equipment needed to perform a surgical cricothyroidotomy.</li> <li>• Provide a detailed description of the actual procedure (technique utilized) taking into account the use of a scalpel as well as sharp pointed scissors.</li> <li>• List and explain the indications and contraindications for orogastric and nasogastric intubation.</li> <li>• Discuss the complications associated with performing this skill in both an awake and an unconscious patient.</li> <li>• List and explain how you would prepare and inspect the equipment needed to perform a nasogastric / orogastric intubation.</li> <li>• Write a detailed step-by-step approach detailing the technique utilized to perform a nasogastric / orogastric intubation in both a conscious and unconscious patient.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Explain pressure controlled ventilation versus volume controlled ventilation</li> <li>• Discuss the indications for mechanical ventilation</li> <li>• Discuss the complications that may be caused by mechanical ventilation</li> <li>• Discuss the following concepts when dealing with mechanical transport ventilators: <ul style="list-style-type: none"> <li>➤ Controlled mechanical ventilation</li> <li>➤ Assist / control mode</li> <li>➤ Synchronized intermittent mandatory ventilation</li> <li>➤ Intermittent positive pressure ventilation</li> <li>➤ Synchronized intermittent positive pressure ventilation</li> <li>➤ Pressure support ventilation</li> <li>➤ Continuous positive airway pressure</li> <li>➤ Tidal volume</li> <li>➤ Minute volume</li> <li>➤ Respiratory rate</li> <li>➤ Peak airway pressure</li> <li>➤ Sensitivity</li> <li>➤ Pressure limit</li> <li>➤ Fraction of inspired oxygen</li> <li>➤ Positive end expiratory pressure</li> <li>➤ Inspiratory-to-expiratory ratio</li> </ul> </li> <li>• Explain in a logical fashion, how to set up a transport ventilator using blood gas values</li> <li>• Explain how to manipulate ventilator settings according to blood gas values</li> <li>• Troubleshoot when encountering problems during mechanical ventilation</li> <li>• Discuss ventilation strategies during special situations</li> <li>• Discuss how you would determine whether a</li> </ul>
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						<p>patient with a bradycardia is stable or unstable</p> <ul style="list-style-type: none"> <li>• List and explain the causes of a bradycardia</li> <li>• Provide a detailed explanation as to the treatment regime you would elect to follow in managing an unstable bradycardia (include all variants)</li> <li>• Describe the different types of pacemakers (permanent and temporary) that are available.</li> <li>• Discuss in detail the physiological effects of pacing.</li> <li>• Explain the advantages of transcutaneous pacing.</li> <li>• List and explain the indications and contraindications of pacing.</li> <li>• Discuss the complications associated with pacing.</li> <li>• Differentiate between asynchronous and synchronous pacing modes. Be sure to include the advantages and disadvantages associated with each mode.</li> <li>• Provide a detailed step-by-step approach to transcutaneous pacing.</li> <li>• Clarify what is meant by the terms overdrive and underdrive pacing.</li> <li>• Explain the procedure that would need to be followed in order to either underdrive or overdrive pace a patient.</li> <li>• Argue the current value of underdrive pacing in the pre-hospital environment.</li> <li>• Discuss how you would determine whether a patient with a tachycardia is stable or unstable?</li> <li>• Differentiate between a physiological and a pathological tachycardia.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Provide a detailed explanation as to the treatment regime you would elect to follow in managing the following tachycardias (include all variants): <ul style="list-style-type: none"> <li>➤ Regular narrow complex tachycardias: <ul style="list-style-type: none"> <li>○ Sinus tachycardia</li> <li>○ Reentry supraventricular tachycardia</li> </ul> </li> <li>➤ Wide complex tachycardias</li> <li>➤ Irregular tachycardias: <ul style="list-style-type: none"> <li>○ Atrial flutter</li> <li>○ Atrial fibrillation</li> <li>○ Polymorphic ventricular tachycardia</li> <li>○ Torsades de Pointes</li> </ul> </li> </ul> </li> <li>• List and discuss the vagal manoeuvres commonly used by Emergency Care Practitioners.</li> <li>• Valsalva manoeuvre: <ul style="list-style-type: none"> <li>➤ Provide a detailed explanation as to how the valsalva manoeuvre accomplishes a slowing of the heart rate.</li> <li>➤ Describe in detail the various techniques that may be utilized to assist your patient in performing a valsalva manoeuvre.</li> <li>➤ Discuss the steps that need to be followed in preparation for a valsalva manoeuvre as well as during the actual procedure.</li> </ul> </li> <li>• Carotid Sinus Massage: <ul style="list-style-type: none"> <li>➤ Provide a detailed explanation as to how the carotid sinus massage affects the heart rate.</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>➤ List and explain the indications and contraindications for carotid sinus massage.</li> <li>➤ Describe the complications associated with performing this skill.</li> <li>➤ Provide a detailed description of the actual procedure (technique utilized).</li> <li>• Explain in detail the effects of cardioversion on the myocardium.</li> <li>• List and explain the indications and contraindications of cardioversion.</li> <li>• Discuss the complications associated with performing cardioversion.</li> <li>• Describe in detail the steps involved in performing cardioversion on the following arrhythmias: <ul style="list-style-type: none"> <li>➤ Narrow complex tachycardias: <ul style="list-style-type: none"> <li>○ Supraventricular tachycardia</li> <li>○ Atrial flutter</li> <li>○ Atrial fibrillation</li> </ul> </li> <li>➤ Monomorphic ventricular tachycardia</li> <li>➤ Polymorphic tachycardia</li> </ul> </li> <li>• Ensure that you have a detailed understanding of the American Heart Association 2010 resuscitation guidelines and the rationale behind all the changes.</li> <li>• Discuss in detail the management of a patient in cardiac arrest providing a motivation for each of your actions. Be sure to address the following arrhythmias: <ul style="list-style-type: none"> <li>➤ Ventricular fibrillation</li> <li>➤ Ventricular tachycardia</li> <li>➤ Pulseless electrical activity</li> <li>➤ Asystole</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>• Explain why the following interventions that were previously thought to be of benefit to a patient in cardiac arrest are no longer supported by outcomes: <ul style="list-style-type: none"> <li>➤ Transcutaneous pacing (underdrive pacing)</li> <li>➤ Precordial thump</li> <li>➤ Routine fluid administration</li> </ul> </li> <li>• Provide a detailed discussion on post-resuscitation support after the return of spontaneous circulation.</li> <li>• List the criteria that need to be assessed before one can terminate a resuscitation attempt.</li> <li>• Describe the anatomical location of the external jugular vein.</li> <li>• List and explain the indications and contraindications of external jugular vein cannulation.</li> <li>• Discuss the advantages and disadvantages associated with performing this skill.</li> <li>• Explain the complications that may arise from performing an external jugular vein cannulation.</li> <li>• Mention all of the recognized methods that you are aware of that can assist in distending the external jugular vein to assist with the cannulation procedure.</li> <li>• List some of the anatomical, physiological and pathological considerations that you would need to be aware of that could make the external jugular vein cannulation procedure more difficult than under normal circumstances.</li> <li>• Provide a detailed explanation as to the procedure you would follow to cannulate the external jugular vein.</li> </ul>
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						<ul style="list-style-type: none"> <li>• List and explain the indications and contraindications of intraosseous cannulation.</li> <li>• Explain the complications that may arise from performing intraosseous cannulation.</li> <li>• List the various sites that may be utilized for intraosseous cannulation.</li> <li>• Discuss in detail the movement of fluid that is administered via intraosseous cannulation.</li> <li>• List and explain how you would prepare and inspect the equipment needed to perform intraosseous cannulation.</li> <li>• Describe how you would assess whether your intraosseous cannulation has been successful.</li> <li>• Provide a detailed explanation as to the procedure you would follow for intraosseous cannulation utilizing the following devices: <ul style="list-style-type: none"> <li>➤ Bone injection gun</li> <li>➤ F.A.S.T.-1 Sternal Intraosseous Device</li> <li>➤ Intraosseous drill</li> <li>➤ Intraosseous needle</li> </ul> </li> <li>• Discuss in detail the approach to managing a patient with a prolapsed cord under the following circumstances: <ul style="list-style-type: none"> <li>➤ Prolapsed cord with no contractions</li> <li>➤ Prolapsed cord with contractions</li> <li>➤ Prolapsed cord with crowning</li> </ul> </li> <li>• Differentiate between the terms sedation and induction.</li> <li>• Discuss in detail the mechanism of action of the following medications during the sedation process: <ul style="list-style-type: none"> <li>➤ Ketamine</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>➤ Midazolam</li> <li>➤ Diazepam</li> <li>➤ Lorazepam</li> <li>➤ Morphine</li> </ul> <ul style="list-style-type: none"> <li>• Demonstrate the ability to calculate drug bolus and infusion dosages, volumes and rates of administration.</li> <li>• Describe and justify the indications for endotracheal intubation (ETI).</li> <li>• Discuss the delivery of oxygen to tissue and factors influencing this.</li> <li>• Relate the physiology of oxygen transport in blood to the principles of pre-oxygenation.</li> <li>• Describe functional airway anatomy as this relates to various airway manoeuvres, bag valve mask ventilation, laryngoscopy and ETI.</li> <li>• Describe the airway axes and explain how these relate to optimal position of a patient for laryngoscopy.</li> <li>• Describe various classification systems used to describe laryngoscopic view.</li> <li>• Explain differences between paediatric and adult airway anatomy that may influence airway management.</li> <li>• Discuss optimal clinical assessment of difficult bag-valve-mask ventilation, adequacy of bag valve-mask ventilation and response to difficult bag-valve-mask situations.</li> <li>• Discuss bag-valve-mask ventilation with specific regard to gastric insufflation, cricoid pressure, auto-PEEP, cervical spine precautions and laryngospasm.</li> <li>• Discuss the preparatory considerations for ETI and list minimum equipment required (STOP IC BARS).</li> <li>• Describe optimal positioning for</li> </ul>
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						<p>laryngoscopy, both routine and in special situations.</p> <ul style="list-style-type: none"> <li>• Discuss equipment choices and the technique of direct laryngoscopy with both curved and straight laryngoscope blades.</li> <li>• Explain correct placement and confirmation of the endotracheal tube using both objective and subjective methods.</li> <li>• Define difficult direct laryngoscopy and describe the predictors of this, using the MMAP approach.</li> <li>• Discuss the response to difficult laryngoscopy, including the use of different laryngoscope blades, other manoeuvres (head lift etc) and BURP or ELM.</li> <li>• Describe the use of adjuncts to direct laryngoscopy including the bougie and fiberoptic stylets.</li> <li>• Describe the complications of endotracheal intubation and steps that can be taken to avoid these during post-intubation care.</li> <li>• Explain the indications, advantages, disadvantages, method for using (including troubleshooting) and effectiveness of the following alternative intubation techniques: <ul style="list-style-type: none"> <li>➤ Intubating Laryngeal Mask Airway</li> <li>➤ King Vision</li> <li>➤ The Airtraq</li> </ul> </li> <li>• Define and justify the term rescue oxygenation, and explain the role that this plays in airway management.</li> <li>• Identify the predictors of difficult rescue oxygenation.</li> <li>• Explain the indications, advantages,</li> </ul>
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						<p>disadvantages, method for using (including troubleshooting) and effectiveness of the following rescue oxygenation devices:</p> <ul style="list-style-type: none"> <li>➤ The LMA (Classic, ProSeal, Supreme)</li> <li>➤ The Oesophageal-Tracheal Combitube;</li> <li>➤ The King LT;</li> <li>➤ Surgical cricothyroidotomy;</li> </ul> <ul style="list-style-type: none"> <li>• Define the term rapid sequence intubation (RSI) and differentiate this from rapid sequence induction</li> <li>• Name the relative contra-indications to RSI.</li> <li>• Discuss the advantages and disadvantages of RSI.</li> <li>• Appraise the current evidence for and against pre-hospital ETI.</li> <li>• Appraise the current evidence for and against the use of RSI, particularly in the pre-hospital environment.</li> <li>• Define the RSI process and explain each of the steps (preparation, pre-oxygenation, pretreatment, induction and pharmacological paralysis, application of cricoid pressure, intubation and confirmation of tube placement, post-intubation management).</li> <li>• Discuss the physiological response (cardiovascular, respiratory and CNS) to laryngoscopy and intubation.</li> <li>• Describe the factors to be taken into consideration when considering the dosage of an induction agent.</li> <li>• Explain the mechanism of action, pharmacokinetics, adverse effects, indications, contraindications and</li> </ul>
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						<p>precautions for the following agents:</p> <ul style="list-style-type: none"> <li>➤ Atropine;</li> <li>➤ Etomidate;</li> <li>➤ Ketamine;</li> <li>➤ Lignocaine;</li> <li>➤ Suxamethonium;</li> <li>➤ Rocuronium;</li> <li>➤ Vecuronium;</li> </ul> <ul style="list-style-type: none"> <li>• Briefly outline the pathophysiology, incidence, detection and treatment of malignant hyperthermia.</li> <li>• Describe the pharmacological considerations applicable to RSI in patients with shock states.</li> <li>• Discuss the differences in RSI applied to paediatric patients.</li> <li>• Discuss management of the post-intubation period with reference to positioning and securing of the endotracheal tube, initiation of positive pressure ventilation (PPV) and treatment of hypotension.</li> <li>• Give the dosage and general approach for post-intubation sedation, analgesia and paralysis using midazolam, morphine, rocuronium and vecuronium.</li> <li>• Explain the principle of the “dimensions of difficulty” triangle in airway management.</li> <li>• Define both the difficult and failed airway</li> <li>• State the incidence of difficult laryngoscopy, first attempt intubation, “can’t intubate, can’t ventilate situations and cricothyroidotomy.</li> <li>• Explain the danger and complications related to multiple intubation attempts.</li> <li>• Discuss a logical strategy to be employed following failed first, second and third intubation attempts.</li> <li>• Compile an algorithm for management of the</li> </ul>
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						<p>difficult airway based on the previous outcome.</p> <ul style="list-style-type: none"> <li>• List the factors contributing to recognition of a failed airway caused by failed intubation and by failed oxygenation.</li> <li>• Discuss physiological and pharmacological considerations as well as technical alterations to airway management for the following conditions: <ul style="list-style-type: none"> <li>➤ Increased intra-cranial pressure;</li> <li>➤ Ischaemic heart disease;</li> <li>➤ Congestive cardiac failure;</li> <li>➤ Cardiac arrest;</li> <li>➤ Obstructing upper airway pathology;</li> <li>➤ Penetrating neck trauma;</li> <li>➤ Lower airway disease;</li> </ul> </li> <li>• Describe the pharmacological consideration applicable to RSI in patients with shock states.</li> <li>• Discuss the physiological and technical challenges in airway management of the very young patient.</li> <li>• Summarise the differences in RSI procedure applicable to infants.</li> <li>• Discuss the physiological and technical challenges in airway management of the very old patient.</li> <li>• Summarise the differences in RSI procedure applicable to an elderly patient.</li> <li>• Describe how the use of a “visual roadmap” may help in preparing for difficult situations in airway management.</li> <li>• Explain how to assess for, identify and manage the following types of imbalances: <ul style="list-style-type: none"> <li>➤ Extracellular Fluid Volume Deficit</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>➤ Brain and CSF infections</li> <li>➤ Brain injury</li> <li>➤ Skull injury</li> <li>➤ Facial bone fractures</li> <li>➤ Spinal cord disease and injury</li> <li>• Explain how to assess for, identify and manage the following musculoskeletal injuries: <ul style="list-style-type: none"> <li>➤ Fractures</li> <li>➤ Sprains</li> <li>➤ Strains</li> <li>➤ Dislocations</li> <li>➤ Closed wounds</li> <li>➤ Open wounds</li> <li>➤ Crush injuries</li> <li>➤ Compartment syndrome</li> </ul> </li> <li>• Correctly assess, diagnose and manage the following disorders and emergencies: <ul style="list-style-type: none"> <li>➤ Blast injuries</li> <li>➤ Ballistic related injuries</li> <li>➤ Burns: <ul style="list-style-type: none"> <li>○ Thermal</li> <li>○ Airway</li> <li>○ Chemical</li> <li>○ Crush syndrome</li> <li>○ Compartment syndrome</li> </ul> </li> <li>➤ Eye trauma: <ul style="list-style-type: none"> <li>○ Lacerations</li> <li>○ Foreign bodies</li> <li>○ Impaled objects</li> <li>○ Blunt eye injuries</li> <li>○ Burns</li> </ul> </li> <li>➤ Dental trauma</li> </ul> </li> <li>• Explain how to assess for, identify and manage the following gastro-intestinal system diseases or injuries: <ul style="list-style-type: none"> <li>➤ Peptic ulcer disease</li> <li>➤ Common infections and inflammation affecting organs in the GIT including the peritoneum</li> <li>➤ Disorders related to hepatic pathology and failure</li> <li>➤ Disorders affecting the intestines</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>➤ Blunt &amp; Penetrating Injuries of Hollow &amp; Solid Viscera</li> <li>➤ Bowel evisceration</li> <li>• Explain how to assess for, identify and manage the following genito-urinary system diseases or injuries: <ul style="list-style-type: none"> <li>➤ Uremic Syndrome</li> <li>➤ Acute Kidney Injury</li> <li>➤ Genito Urinary Tract Injuries (blunt &amp; penetrating)</li> <li>➤ Testicular Torsion</li> </ul> </li> <li>• Explain how to assess for, identify and manage the following gynecological and obstetrical emergencies: <ul style="list-style-type: none"> <li>➤ Inappropriate and abnormal vaginal bleeding – irrespective of the cause</li> <li>➤ Preeclampsia &amp; eclampsia</li> <li>➤ Malpresentation of fetus</li> <li>➤ Prolapsed cord</li> <li>➤ Premature labor</li> <li>➤ Uterine inversion</li> </ul> </li> <li>• Explain how to assess for, identify and manage the following endocrine disorders and emergencies: <ul style="list-style-type: none"> <li>➤ Diabetes Mellitus and related complications</li> <li>➤ Inappropriate ADH Secretion</li> <li>➤ Hyperthyroidism and Hypothyroidism</li> <li>➤ Addison's Disease</li> <li>➤ Cushing's Syndrome</li> <li>➤ Pheochromocytoma</li> </ul> </li> <li>• Explain how to assess for, identify and manage conditions related to HIV/AIDS.</li> <li>• Explain how to assess for and identify disorders and emergencies that could arise due to viral hemorrhagic fevers.</li> <li>• Explain the risks that are associated with the management of viral hemorrhagic fevers, as</li> </ul>
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						<p>well as how to mitigate those risks.</p> <ul style="list-style-type: none"> <li>• Explain how to report a VHF incident.</li> <li>• Explain how to assess for and identify disorders and emergencies that could arise due to viral hemorrhagic fevers in a written knowledge task.</li> <li>• Explain the risks that are associated with the management of viral hemorrhagic fevers, as well as how to mitigate those risks in a written knowledge task.</li> <li>• Explain how to report a VHF incident as part of a scenario based question in a written knowledge task.</li> <li>• The following conditions have relevance: <ul style="list-style-type: none"> <li>➤ Ebola Viral Haemorrhagic Fever</li> <li>➤ Marburg Viral Haemorrhagic Fever</li> <li>➤ Lassa Fever</li> <li>➤ Yellow Fever</li> <li>➤ Malaria</li> </ul> </li> </ul>
Fire Search & Rescue 1	FSR01Y2	100%	0%	6	12	<p>The purpose of this module was to provide the student with the skills and knowledge for incidents involving victims that need to be searched for and rescued from incidents involving oxygen deprived environments in smoke and heat-filled compartments. This module highlighted basic fire behaviour and it's dynamics as well as the equipment that is used on the fireground. The major focus of the module was the use of self-contained breathing apparatus and deployment for search and rescue.</p> <p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Fire dynamics and fire behavior <ul style="list-style-type: none"> <li>○ Discuss the physical and chemical changes of matter.</li> <li>○ Define the following terms relating to the science of fire: <ul style="list-style-type: none"> <li>▪ Fire triangle</li> <li>▪ Fire tetrahedron</li> <li>▪ Combustion</li> <li>▪ Heat</li> <li>▪ Vaporisation</li> <li>▪ Flash point</li> <li>▪ Fire point</li> <li>▪ Ignition temperatures</li> <li>▪ Pyrolysis</li> </ul> </li> <li>○ Discuss the ways in which heat is transferred.</li> <li>○ List the sources of heat energy.</li> <li>○ List the products of combustion.</li> </ul> </li> </ul>

							<ul style="list-style-type: none"> <li>○ Explain how fires are classified.</li> <li>○ Differentiate between fuel controlled and ventilation controlled fire development.</li> <li>○ Describe the phases/stages of fire in a compartment.</li> <li>○ Define the following terms relating to the growth stage of fire in a compartment: <ul style="list-style-type: none"> <li>▪ Thermal layering</li> <li>▪ Rollover</li> <li>▪ Flashover</li> </ul> </li> <li>○ Describe the formation of a backdraft in a compartmental fire.</li> <li>○ Explain the factors that influence the development of fire within a compartment.</li> <li>○ Discuss the principles in which a fire can be controlled.</li> <li>○ Identify the commonly used extinguishing agents.</li> <li>• Personal protective equipment used for fire search and rescue <ul style="list-style-type: none"> <li>○ Identify the points that should be taken into consideration when choosing the following items for fire search and rescue: <ul style="list-style-type: none"> <li>▪ Helmet</li> <li>▪ Protective hood ('flashhood')</li> <li>▪ Hearing protection</li> <li>▪ Eye protection</li> <li>▪ Protective turnout coat and trousers (Bunker gear)</li> <li>▪ Protective footwear</li> <li>▪ Protective handwear</li> <li>▪ Personal Alert Safety System (PASS) device</li> </ul> </li> <li>○ Explain how you would care for, and</li> </ul> </li> </ul>
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						<p>maintain all the aforementioned items.</p> <ul style="list-style-type: none"> <li>○ Explain reasons for using respiratory protection during fire search and rescue.</li> <li>○ Describe the limitations of the various breathing apparatus with regard to: <ul style="list-style-type: none"> <li>▪ Limitations of the wearer</li> <li>▪ Limitations of the equipment</li> <li>▪ Limitations of the air supply</li> </ul> </li> <li>○ Identify the various types of breathing apparatus: <ul style="list-style-type: none"> <li>▪ Open-circuit Self Contained Breathing Apparatus (SCBA)</li> <li>▪ Open-circuit Airline</li> <li>▪ Closed-circuit Breathing Apparatus</li> </ul> </li> <li>○ Describe the function of each of the components of an SCBA. (incl mask)</li> <li>○ List the areas that should be checked during a daily visual inspection of an SCBA.</li> <li>○ Describe the following terms in relation to high pressure vessels. <ul style="list-style-type: none"> <li>▪ Pressure</li> <li>▪ Volume</li> <li>▪ Flow</li> </ul> </li> <li>○ Calculate air consumption of the wearer of an SCBA.</li> <li>○ Calculate the estimated duration on air of the wearer of an SCBA.</li> <li>○ Explain the factors that will affect air consumption of the wearer of an SCBA.</li> <li>○ List the steps that should be followed in emergency situations while using an SCBA.</li> </ul>
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							<ul style="list-style-type: none"> <li>○ Discuss the dangers associated with 'skip breathing'.</li> <li>○ Explain the process of hydrostatic testing with regards to high pressure vessels used with the SCBA.</li> <li>○ Briefly explain how air is compressed using a 3-stage compressor unit.</li> <li>○ List the precautionary safety measures that should be adhered to when using a compressor.</li> <li>○ Discuss what considerations need to be taken when using a portable compressor in an outdoor location.</li> <li>○ List the considerations that need to be taken when storing pressure vessels.</li> </ul> <ul style="list-style-type: none"> <li>• Search and rescue techniques on the fireground <ul style="list-style-type: none"> <li>○ Explain what is meant by 'risk vs. benefit' on the fire ground.</li> <li>○ Identify the various building types with regard to their construction and layout.</li> <li>○ Discuss the associated dangers that the different building components may pose to a search and rescue team during a fire.</li> <li>○ List the factors that should be considered when determining the potential for a structure to collapse during a fire.</li> <li>○ List the indicators of potential or imminent collapse during a fire.</li> <li>○ Explain how a collapse zone is determined on the exterior of the building.</li> </ul> </li> </ul>
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						<p>safety, before they receive treatment, once located during the search.</p> <ul style="list-style-type: none"> <li>• Structural access techniques <ul style="list-style-type: none"> <li>○ Define 'forcible entry' as it is applicable to the Fire Brigade Act.</li> <li>○ List the four basic categories of forcible entry tools.</li> <li>○ Understand the association between specific tools and special forcible entry needs.</li> <li>○ List the items to look for when 'sizing-up' at door for potential forcible entry.</li> <li>○ Describe the basic construction of a typical door.</li> <li>○ Describe the basic construction of a typical window.</li> <li>○ Describe the basic construction of a typical wall.</li> <li>○ List the hazards associated with forcible entry.</li> <li>○ Identify the different parts of a ladder.</li> <li>○ List the precautions that you need to take before raising a ladder</li> </ul> </li> <li>• Ventilation on the Fireground <ul style="list-style-type: none"> <li>○ Describe reasons that you would ventilate on a fireground.</li> <li>○ List the hazards that could be in a building or compartment with accumulated smoke and gas.</li> <li>○ Identify the considerations that affect the decision to ventilate.</li> <li>○ Define 'vertical' ventilation.</li> <li>○ Define 'horizontal' ventilation.</li> <li>○ List the warning signs of an unstable roof.</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>○ Differentiate between positive pressure ventilation (PPV) and negative pressure ventilation (NPV)</li> <li>○ List the disadvantages of hydraulic ventilation.</li> <li>● Fire fighting equipment <ul style="list-style-type: none"> <li>○ Classify the various types of portable fire extinguishers.</li> <li>○ Explain the care and maintenance of a portable fire extinguisher.</li> <li>○ Identify different types of portable smothering devices.</li> <li>○ Identify different types of hydrants.</li> <li>○ Explain how to locate a hydrant.</li> <li>○ Discuss the fundamentals of water supply to the fireground and fire source.</li> <li>○ Identify the different hose construction.</li> <li>○ Identify the different hose couplings.</li> <li>○ Identify the meaning of voice and signal commands relating to the use of hose on the fireground.</li> <li>○ Identify different types of branches used.</li> <li>○ Explain the function of the different streams that are created by various branches.</li> <li>○ Explain how foam is generated.</li> <li>○ List the reasons for the use of foam.</li> <li>○ Identify different aerial appliances that may be found on the fireground.</li> <li>○ Explain the value of aerial appliances which can be used for search and rescue operations.</li> </ul> </li> <li>● Practical skills outcomes</li> </ul>
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							<ul style="list-style-type: none"> <li>○ Act in a safe manner during all fire search and rescue training scenarios.</li> <li>○ Correctly don and doff all PPE used for fire search and rescue.</li> <li>○ Stage an area for all fire search and rescue equipment during training.</li> <li>○ Fulfil the role of each member within a fire search and rescue team.</li> <li>○ Correctly assemble an SCBA to be used for search and rescue.</li> <li>○ Correctly carryout pre-use check all components of the SCBA including: <ul style="list-style-type: none"> <li>▪ Visual inspection</li> <li>▪ High pressure test</li> <li>▪ Low pressure test</li> <li>▪ Negative pressure test of the mask</li> <li>▪ Positive pressure leak test of the mask</li> <li>▪ Demand valve test</li> <li>▪ Purge valve test</li> </ul> </li> <li>○ Correctly don and doff the SCBA using different techniques.</li> <li>○ Care and maintain all the SCBA components.</li> <li>○ Fulfil the roles and responsibility of an Entry Control Officer.</li> <li>○ Correctly manage a BA tally board.</li> <li>○ Correctly use a SCBA under the following conditions: <ul style="list-style-type: none"> <li>▪ Areas of limited visibility for more than 15min</li> <li>▪ Pass through dimension-restricted areas</li> <li>▪ Carryout tasks in hot and oxygen</li> </ul> </li> </ul>
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						<p>deprived compartments</p> <ul style="list-style-type: none"> <li>▪ Search for victims and objects in limited visibility</li> <li>▪ Rescue victims using different drag and carry techniques</li> <li>▪ Complete an obstacle course to simulate barricades, restrictions and difficulty of equipment.</li> <li>▪ While carrying out forcible entry tasks.</li> <li>▪ Working on ground ladders.</li> </ul> <ul style="list-style-type: none"> <li>○ Follow the recommended actions during emergency situations caused by SCBA malfunctions.</li> <li>○ Use a hose line to exit a building by identifying the couples.</li> <li>○ Conduct a primary search.</li> <li>○ Conduct a secondary search</li> <li>○ Conduct a search using a tag/personnel line.</li> <li>○ Conduct a search for a victim in a limited visibility area using the left/right hand rule.</li> <li>○ Correctly mark an area that has been searched using recognised methods.</li> <li>○ Correctly manage a conscious victim once they have been located and assist them to safety.</li> <li>○ Correctly move an unconscious patient using the following techniques: <ul style="list-style-type: none"> <li>▪ Incline drag</li> <li>▪ Blanket drag</li> <li>▪ Webbing drag</li> <li>▪ Cradle-in-arms lift/carry</li> <li>▪ Seat lift/carry</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Three person lift/carry</li> <li>▪ Extremities lift/carry</li> <li>▪ Chair lift/carry</li> <li>▪ Litter carry</li> <li>▪ Spineboard / Scoop stretcher carry</li> <li>○ Force entry using the appropriate tool through: <ul style="list-style-type: none"> <li>▪ Outward and inward swinging doors</li> <li>▪ Different windows</li> <li>▪ Burglar bars and gates</li> <li>▪ Roller shutter doors</li> <li>▪ Padlocks</li> <li>▪ Electric gates</li> </ul> </li> <li>○ Care and maintain all forcible entry tools</li> <li>○ Use the following techniques to carry and move a ground ladder: <ul style="list-style-type: none"> <li>▪ One fire-fighter low shoulder</li> <li>▪ Two fire-fighter low shoulder</li> <li>▪ Three fire-fighter flat shoulder</li> </ul> </li> <li>○ Correctly tie a halyard of a ground ladder.</li> <li>○ Correctly raise and lower the following ladders: <ul style="list-style-type: none"> <li>▪ Single ladder</li> <li>▪ Extension ladder</li> </ul> </li> <li>○ Correctly pivot and shift a ladder</li> <li>○ Perform a 'leg lock' while carrying out a task on a ground ladder</li> <li>○ Assist a conscious victim down a ladder.</li> <li>○ Remove an unconscious victim down a ground ladder</li> <li>○ Using a ladder to access an area to be searched carrying an appropriate forcible entry tools.</li> <li>○ Correctly operate a portable fire extinguisher.</li> <li>○ Correctly locate and operate a standpipe</li> </ul>
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						<p>hydrant system in the correct manner.</p> <ul style="list-style-type: none"> <li>○ Connect a hose line with the following coupling: <ul style="list-style-type: none"> <li>▪ NST</li> <li>▪ Instantaneous</li> <li>▪ Storz</li> </ul> </li> </ul>
Foundations of Professional Practice	FPP01Y1	100%	0%	5	12	<p>In order to function effectively as a professional emergency care provider it is important to recognise that there exists an additional body of knowledge, skills and insights apart from that which can be directly linked to the clinical management of the ill or injured patient. As the student worked through this module, they were exposed to this important area of emergency care practice that is often taken for granted. The aim of this module was thus to enable the student to function effectively and professionally within an emergency health care system or structure.</p> <p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Identify the aims of the National Health system, and discuss the shortfalls and potential solutions with regard thereto.</li> <li>• Elaborate on the terms below: <ul style="list-style-type: none"> <li>➢ Batho Pele Principles</li> <li>➢ Patients' Right Charter</li> <li>➢ Constitution</li> </ul> </li> <li>• Identify the relevant role players in the National Health system that are responsible to ensure that the requirements of the Constitution, Batho Pele and the Patients' Right Charter reach the client.</li> <li>• Identify positions within an organogram of: <ul style="list-style-type: none"> <li>➢ The National Department of Health</li> <li>➢ A Provincial EMS</li> <li>➢ A Local Authority EMS</li> </ul> </li> <li>• Briefly discuss the roles of the following people: <ul style="list-style-type: none"> <li>➢ Minister of Health</li> <li>➢ MEC of Health</li> </ul> </li> <li>• Highlight the problems and benefits with regard to a strong developing private health sector.</li> <li>• Identify the various health establishments</li> <li>• List the functions of the health establishments at each level</li> <li>• Describe the function of each health establishment.</li> <li>• List the different levels of Trauma Centre accreditation as outlined</li> </ul>

						<p>by the Trauma Society of SA.</p> <ul style="list-style-type: none"> <li>• Describe the criteria which make up each accredited level.</li> <li>• Describe the benefits of such a system.</li> <li>• Identify positions within an organogram of: <ul style="list-style-type: none"> <li>➤ A major tertiary health establishment</li> </ul> </li> <li>• List the objectives of ambulance services as outlined in the Gauteng Ambulance Services act.</li> <li>• Explain how the various acts and regulations came into being.</li> <li>• Explain the importance and purpose of an act.</li> <li>• Explain how acts are amended.</li> <li>• Discuss the procedure that is followed when two acts are in conflict.</li> <li>• Explain the role and function of the Health Professions Council of South Africa (HPCSA).</li> <li>• Discuss the relationship between the Professional Board of Emergency Care (PBEC) and the HPCSA</li> <li>• List the sub-committees within the PBEC</li> <li>• Explain the importance of reporting malpractice to the HPCSA.</li> <li>• Discuss the procedures you should follow if you are accused of malpractice</li> <li>• Define the legal terminology below: <ul style="list-style-type: none"> <li>➤ Consent</li> <li>➤ Malpractice</li> <li>➤ Negligence</li> <li>➤ Confidentiality and Privacy</li> <li>➤ 'Reasonable Man' Test</li> <li>➤ Abandonment</li> <li>➤ Slander and defamation</li> <li>➤ Liability</li> <li>➤ Beneficence</li> <li>➤ Non-maleficence</li> </ul> </li> <li>• Discuss ethical and moral behaviour when practicing as an</li> </ul>
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						<p>emergency care practitioner</p> <ul style="list-style-type: none"> <li>• Discuss the importance of personal presentation in the emergency care environment.</li> <li>• Explain the importance of anti-discriminatory practice.</li> <li>• Explain how a practitioner takes cultural diversity and language into account when managing incidents and dealing with a diverse range of patients.</li> <li>• Provide a definition of clinical governance.</li> <li>• Provide a definition of clinical auditing.</li> <li>• Explain the purpose of evidence-based practice</li> <li>• Explain the importance of continued medical education and professional development</li> <li>• Define communication</li> <li>• Differentiate between verbal and non-verbal communication</li> <li>• Interpret the 'Model of Interpersonal Communication'</li> <li>• Identify the various types of emergency vehicles.</li> <li>• List the specific vehicle requirements, which are stipulated by the Board of Healthcare Funders, that need to be satisfied in order to register an ambulance with the organisation.</li> <li>• Describe the purpose of the licence disk and operator card which needs to be displayed on the windscreen of an emergency vehicle.</li> <li>• Discuss the sections of the road traffic act that deal with: <ul style="list-style-type: none"> <li>➤ Responding to an incident</li> <li>➤ Stopping at the incident</li> </ul> </li> <li>• Describe the steps to navigate to the location of an incident using a map book.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Describe the steps to navigate to the location of an incident using a GPS.</li> <li>• Identify a safe area to stop your vehicle at the scene of an incident.</li> <li>• Demonstrate how to use your vehicle to protect the scene of an incident.</li> <li>• List the guidelines that are used when placing road cones to protect an incident.</li> <li>• Explain the following concepts: <ul style="list-style-type: none"> <li>➤ Aquaplaning</li> <li>➤ Over steer</li> <li>➤ Under steer</li> <li>➤ Automatic breaking systems</li> <li>➤ Aggressive driving</li> <li>➤ Defensive driving</li> </ul> </li> <li>• Perform an inspection on the following essential vehicle components to assess if the vehicle is fit for duty: <ul style="list-style-type: none"> <li>➤ Engine components: <ul style="list-style-type: none"> <li>○ Water levels</li> <li>○ Brake fluid levels</li> <li>○ Oil levels</li> <li>○ Condition of fan belt</li> <li>○ Condition of battery terminals</li> <li>○ Battery fluid levels</li> </ul> </li> <li>➤ Tyres and wheels: <ul style="list-style-type: none"> <li>○ Pressures</li> <li>○ Tread</li> <li>○ Spare wheel</li> </ul> </li> <li>➤ Wear and tear of brake pads</li> <li>➤ Electrical components: <ul style="list-style-type: none"> <li>○ Lights</li> <li>○ Emergency lights</li> </ul> </li> <li>➤ Vehicle body</li> <li>➤ Internal structures of the vehicle</li> </ul> </li> <li>• Demonstrate the ability to troubleshoot the following issues or problems using the manufacture's guidelines: <ul style="list-style-type: none"> <li>➤ Puncture of tyre or damaged rim</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>➤ Flat battery</li> <li>➤ Dashboard warning indicator lights</li> <li>➤ Engine overheating</li> <li>• Differentiate between a detergent and a disinfectant.</li> <li>• Demonstrate an ability to clean and disinfect a vehicle in a safe and effective manner.</li> <li>• Discuss the appropriate actions one should take should your vehicle become involved in an accident.</li> <li>• List the general duties of the employer towards the employee as stipulated in the Occupational Health and Safety Act.</li> <li>• List the general duties of the employee towards the employer as stipulated in the Occupational Health and Safety Act.</li> <li>• Discuss the common hazards that are associated with emergency service work.</li> <li>• Explain the importance of scene safety.</li> <li>• Provide a generic approach to rendering safety to all persons on a scene.</li> <li>• List the items of personal protective clothing that need to be available for use during the rendering of emergency care services.</li> <li>• Explain the procedure that should be followed should you become exposed to pathogens.</li> <li>• Explain the procedure that should be followed should you become injured during the course of your duties.</li> <li>• List the vaccines and prophylactic immunizations that are applicable to the emergency care provider.</li> <li>• Explain the importance of physical and mental</li> </ul>
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						<p>fitness for emergency service workers.</p> <ul style="list-style-type: none"> <li>• Demonstrate the correct method for lifting and carrying a weight.</li> <li>• Describe the fundamentals of the management of bio-hazardous waste in the healthcare environment.</li> <li>• Correctly identify the components of a radio. (Portable and base station)</li> <li>• Discuss the care and maintenance of a radio.</li> <li>• Differentiate between amplitude modulation, frequency modulation and Terrestrial Trunked Radio (TETRA) systems.</li> <li>• Discuss factors that may affect radio communications.</li> <li>• Effectively send and receive messages by radio using the correct voice procedure guidelines: <ul style="list-style-type: none"> <li>➤ Operating technique</li> <li>➤ Operating protocol</li> <li>➤ Phonetic alphabet</li> <li>➤ Time format</li> <li>➤ Numerals</li> <li>➤ Standard phrases</li> </ul> </li> <li>• List the important information that should be captured by a call taker.</li> <li>• Explain the legal and regulatory issues pertaining to emergency call centre staff.</li> <li>• Discuss the limitations of providing telephonic advice in emergency situations.</li> <li>• Discuss the principles of computer-aided dispatch.</li> <li>• Explain the importance of keeping accurate records of incidents.</li> <li>• Accurately complete patient care records.</li> <li>• Explain the legal framework relating to the storage of patient care records.</li> <li>• Explain the correct procedure for handing a</li> </ul>
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							<p>patient over to another member of the health care team.</p> <ul style="list-style-type: none"> <li>• Describe the importance of dealing with a patient's valuables found on scene.</li> <li>• Discuss the general principles when dealing with the media or the public.</li> <li>• Discuss the ways in which you can assist the police in preserving evidence at the scene of a suspected crime.</li> <li>• Demonstrate how to manage a firearm when it is found at an incident.</li> <li>• Discuss the concept of organ donation.</li> <li>• Explain how a health care provider may be able to assist in the process of organ donation</li> <li>• Explain the correct method of dealing with bystanders.</li> <li>• Discuss the legislation pertaining to breaking and entering in emergency situations</li> <li>• Discuss the legal stance or legislation that dictates which organisation or authority has the right to assume overall control of an incident.</li> </ul>
General Pathology 1	GPA01Y2	100%	0%	6	12	<p>The purpose of General Pathology was to provide a theoretical basis related to pathophysiology and trauma that could be applied in other subjects. An understanding of these entities was needed in Diagnostics and, most importantly, in Emergency Medical Care (EMC). An understanding of pathophysiology is important not only as it relates to reaching provisional diagnoses, but also as it relates to patient</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Discuss the cellular response to stress, injury and aging in detail.</li> <li>• Discuss inflammation and the inflammatory response process in detail.</li> <li>• Discuss cell proliferation, tissue generation and tissue repair in detail.</li> <li>• Discuss mechanisms of infectious disease in detail.</li> <li>• Discuss the pathophysiology of Human</li> </ul>

					<p>care and related decision-making. The need for treatment, the type of treatment and the possible complications of treatment for any disease or disorder are impossible to determine without a thorough understanding of the disease or disorder. Classifying the stages and severity of diseases and disorders is also an important applied function on which appropriate patient care rests.</p>	<p>Immunodeficiency Virus in detail.</p> <ul style="list-style-type: none"> <li>• Discuss the pathophysiology of Influenza in detail.</li> <li>• Discuss the pathophysiology of Hepatitis in detail.</li> <li>• Discuss the pathophysiology of Human Papilloma Virus in detail.</li> <li>• Describe the pathophysiology of Tuberculosis in detail.</li> <li>• Describe the pathophysiology of Pneumonia in detail.</li> <li>• Describe the pathophysiology of Chronic Obstructive Pulmonary Disease in detail.</li> <li>• Describe the pathophysiology of Asthma in detail.</li> <li>• Describe the pathophysiology of Bronchiectasis in detail.</li> <li>• Describe the pathophysiology of Cerebrovascular disease in detail.</li> <li>• Describe the pathophysiology of Coronary Artery Disease in detail.</li> <li>• Describe the pathophysiology of Hypertension in detail.</li> <li>• Describe the pathophysiology of Cor Pulmonale in detail.</li> <li>• Describe the pathophysiology of Congestive Cardiac Failure in detail.</li> <li>• Describe the pathophysiology of Congenital Cardiac Conditions in detail.</li> <li>• Describe the pathophysiology of fluid imbalance disorder in detail.</li> <li>• Describe the pathophysiology of electrolyte imbalance disorder in detail.</li> <li>• Describe the pathophysiology of Acid-base imbalance disorder in detail.</li> </ul>
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						<ul style="list-style-type: none"> <li>Describe the pathophysiology of Diabetes Mellitus in detail.</li> <li>Describe the pathophysiology of Dysentery in detail.</li> <li>Describe the pathophysiology of Cholera in detail.</li> <li>Describe the pathophysiology of Typhoid Fever in detail.</li> <li>Describe the pathophysiology of Enterocolitis in detail.</li> <li>Describe the pathophysiology of Neoplasia in detail.</li> <li>Describe the pathophysiology of Anaphylaxis in detail.</li> <li>Describe in detail, the pathological effect that trauma has on the major organ systems.</li> </ul>
Hazardous Materials Rescue	HAZ01Y4	100%	0%	8	6	<p>The Hazardous Materials Rescue module provided the students with the necessary knowledge and skills that will act as a foundation for command, control and safety around incidents involving hazardous materials spills. Common hazardous spills, levels of protection and site decontamination procedures and systems were covered.</p> <p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>Introduction to hazardous materials rescue <ul style="list-style-type: none"> <li>Explain the role of Occupational Safety and Health Authority (OSHA) and other regulations pertaining to Hazardous Materials.</li> <li>Explain the use of National Fire Protection Association (NFPA) in generating standards for HAZMAT scene management.</li> <li>Define the following terms: <ul style="list-style-type: none"> <li>Hazardous material</li> <li>Hazardous waste</li> <li>Hazardous substance</li> <li>Hazardous chemical</li> <li>Extremely hazardous substance</li> </ul> </li> </ul> </li> </ul>

							<ul style="list-style-type: none"> <li>▪ Dangerous goods</li> <li>○ Identify the different means of transport utilised to transport hazardous materials.</li> <li>○ Identify occupancies and locations in the community where hazardous materials are manufactured, transported, stored, used or disposed.</li> <li>○ Suspect or recognise the presence of a hazardous material.</li> <li>○ Be able to take the appropriate steps in order to protect yourself and any other bystanders or support services present at a HAZMAT incident. Call for the appropriate assistance.</li> <li>○ Secure the area using the Emergency Response Guide.</li> <li>• Properties of hazardous materials <ul style="list-style-type: none"> <li>○ Explain how hazardous substances are classified (class and properties of each class).</li> <li>○ Describe the effects of exposure to hazardous materials on humans.</li> <li>○ Discuss the radiation protection strategies.</li> <li>○ Define the following terms: <ul style="list-style-type: none"> <li>▪ Threshold limit values</li> <li>▪ Threshold limit values/time weighted average</li> <li>▪ Threshold limit values/short exposure limit</li> <li>▪ Threshold limit values/ceiling level</li> <li>▪ Permissible exposure limit</li> <li>▪ Lethal dose</li> <li>▪ Lethal concentration</li> </ul> </li> </ul> </li> </ul>
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							<p>Immediate dangerous to life health</p> <ul style="list-style-type: none"> <li>▪ Flash point</li> <li>▪ Auto ignition temperature</li> <li>▪ Flammable (explosive) range</li> <li>▪ Specific gravity</li> <li>▪ Vapour density</li> <li>▪ Boiling point</li> <li>▪ Water solubility</li> <li>▪ Toxic products of combustion</li> <li>▪ Hypergolic materials</li> <li>▪ Pyrophoric materials</li> <li>▪ Water reactive materials</li> </ul> <ul style="list-style-type: none"> <li>○ Know the limitations to which workers may be exposed to hazardous materials before experiencing the harmful effects.</li> <li>○ Apply the terminology from this module practically.</li> </ul> <ul style="list-style-type: none"> <li>• Recognition of hazardous materials <ul style="list-style-type: none"> <li>○ Discuss the impact of hazardous materials on the environment.</li> <li>○ Explain the relevance and importance of pre-planning for hazardous material incidents.</li> <li>○ Describe the different types of informal and formal methods of identification for hazardous materials.</li> <li>○ Explain the methods available to identify hazardous materials at fixed facilities, by transportation container or during transportation.</li> <li>○ Discuss different types monitoring systems available for hazardous materials.</li> <li>○ Perform a pre-incident plan for a specific area/facility.</li> <li>○ Correctly utilize an ERG for hazardous substance</li> </ul> </li> </ul>
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						<p>identification as part of a practical scenario.</p> <ul style="list-style-type: none"> <li>○ Utilize other formal and informal methods to identify a hazardous material on a scene.</li> <li>○ Identify hazardous materials at a fixed facility, in transportation containers or during transportation.</li> <li>○ Utilize the different monitoring instruments available.</li> <li>● Hazard and risk assessment <ul style="list-style-type: none"> <li>○ Discuss the immediate concern strategy and the primary objective of a hazardous material incident.</li> <li>○ Elaborate on some of the factors that may affect the success of the primary objectives.</li> <li>○ Describe the criteria for strategic objectives and include in this the 3 strategic options.</li> <li>○ Explain the pre-activity assessment.</li> <li>○ Define the acronym IFSTA.</li> <li>○ Discuss the General Emergency Behaviour Model pertaining to containers in hazardous material incidents.</li> <li>○ Identify conditions that should be noted when assessing a hazardous material incident.</li> <li>○ Apply immediate concern strategies to the hazardous material incident.</li> </ul> </li> <li>● Incident command, safety and scene control <ul style="list-style-type: none"> <li>○ Discuss emergency information management with reference to internal and external communication.</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>○ Explain the personnel responsibilities at a HAZMAT incident, pay special attention to the role of the Entry Team.</li> <li>○ Systematically explain the step-by-step procedure to follow for a hazardous material incident and make reference to the following: <ul style="list-style-type: none"> <li>▪ Hazard assessment</li> <li>▪ Information gathering and evaluation</li> <li>▪ Mode of operation</li> <li>▪ Level of incident</li> <li>▪ Initial isolation distance</li> <li>▪ Protective action distance</li> <li>▪ Scene control zones (hot, warm &amp; cold)</li> </ul> </li> <li>○ Isolate a hazardous area and deny entry.</li> <li>○ Evacuate the area.</li> <li>○ Utilize the Incident Command System at an incident.</li> <li>• Tactical priorities and defensive control strategies <ul style="list-style-type: none"> <li>○ Discuss the tactical objectives that would need to be accomplished in order to meet the</li> <li>○ strategic objectives.</li> <li>○ Briefly explain each of the defensive control measures that may be used to contain and/or confine a material.</li> <li>○ Identify the materials potential threats.</li> <li>○ Size up of the material that has escaped.</li> <li>○ Control of all ignition sources.</li> <li>○ Protect the material from excess heat, shock or contamination.</li> <li>○ Contain material runoff.</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>○ Utilize the various defensive control measures.</li> <li>○ Utilize foam control measures.</li> <li>• Specific healthcare aspects related to hazardous materials contamination <ul style="list-style-type: none"> <li>○ Describe the properties of each of the above agents</li> <li>○ Describe the mechanism of action pertaining to all of the above agents.</li> <li>○ Describe the clinical features of exposure to all of the above agents</li> <li>○ Discuss the management strategies, including specific antidotes (where applicable) of the above agents.</li> </ul> </li> <li>• Decontamination techniques <ul style="list-style-type: none"> <li>○ Briefly define contamination, exposure and secondary contamination.</li> <li>○ Explain the roles of the decontamination officer and the decontamination team.</li> <li>○ Discuss the different points you would take into consideration when selecting a decontamination site.</li> <li>○ Discuss how you would set up a decontamination area and run through the different steps in the procedure.</li> </ul> </li> <li>• Practical skills outcomes <ul style="list-style-type: none"> <li>○ Act in a safe manner during all high angle training scenarios.</li> <li>○ Correctly don and doff a level A ensemble.</li> <li>○ Correctly don and doff a level B non-encapsulated chemical protective clothing ensemble.</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>○ Correctly don and doff a level C chemical protective clothing ensemble.</li> <li>○ Correctly don and doff a level D chemical protective clothing ensemble.</li> <li>○ Setting up a technical decontamination station.</li> <li>○ Perform a technical decontamination of a victim.</li> <li>○ Perform a technical decontamination of an entry team member.</li> <li>○ Perform an emergency decontamination of a victim.</li> <li>○ Perform an emergency decontamination of an entry team member.</li> <li>○ Demonstrate the following victim carrying and drag techniques in the different levels of PPE: <ul style="list-style-type: none"> <li>▪ Two-person extremity carry</li> <li>▪ Two-person seat carry</li> <li>▪ Clothes drag</li> <li>▪ Blanket drag</li> <li>▪ Standing drag</li> <li>▪ Webbing sling drag</li> <li>▪ Emergency drag from vehicle</li> </ul> </li> <li>○ Use of a multi-gas meter</li> </ul>
High Angle 1	HAR01Y2	100%	0%	6	12	The purpose of this module was to provide the students with the necessary knowledge and skills that will act as a foundation for incidents involving victims that need to be accessed at height and form an integral part of the student's foundational knowledge for the High Angle II module.	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>○ Introduction to high angle rescue</li> <li>○ Differentiate between recreational high angle activities and rescue.</li> <li>○ Identify the environments in which high angle rope techniques are used for access and rescue.</li> </ul>

						<ul style="list-style-type: none"> <li>○ Discuss the role of the allied services in the high angle environment: <ul style="list-style-type: none"> <li>▪ South African National Defence Force (SANDF)</li> <li>▪ Mountain Club of South Africa (MCSA)</li> <li>▪ Off Road Rescue Unit (ORRU)</li> <li>▪ South African Police Services (SAPS)</li> <li>▪ Emergency Management Services (EMS)</li> </ul> </li> <li>○ Discuss the legislation applicable to working at heights and its application in the rescue environment.</li> <li>○ Explain the concepts related to the term 'operational readiness.' Department of Emergency Medical Care 15</li> <li>○ Discuss the roles and responsibilities of the different members of the high angle rescue team: <ul style="list-style-type: none"> <li>▪ Team Leader</li> <li>▪ Safety</li> <li>▪ Medic I and II</li> <li>▪ Rigger I and II</li> </ul> </li> <li>○ Discuss safety in the high angle environment.</li> <li>○ Explain the effects of rescuer fatigue on the efficiency of an high angle rescue operation</li> <li>○ Knots used in the high angle rescue environment</li> <li>○ List the characteristics of a good knot that will be used in high angle rescue.</li> <li>○ Discuss the importance of dressing a knot correctly.</li> <li>○ Explain the effects that knots have on rope.</li> <li>○ Explain the 4:1 principle in relation to the design of knots.</li> <li>○ Identify the functions of different knots in the high angle rescue environment.</li> <li>○ Define the different types of knots. <ul style="list-style-type: none"> <li>▪ Loops</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>▪ Hitches</li> <li>▪ Bends</li> <li>○ List the categories of knots used in the high angle environment. <ul style="list-style-type: none"> <li>▪ Safety knots</li> <li>▪ Overhand knot</li> <li>▪ Barrel hitch</li> <li>▪ Stopper knot</li> <li>▪ Anchor knots</li> <li>▪ Figure-8 on a bight</li> <li>▪ Rewoven figure-8</li> <li>▪ Double loop figure-8</li> <li>▪ Tensionless hitch</li> <li>▪ Bowline knot</li> <li>▪ Clove</li> <li>▪ Joining Knots</li> <li>▪ Figure-8 bend (Flemish bend)</li> <li>▪ Double Fishermans</li> <li>▪ Square knot</li> <li>▪ Special-Purpose Knots</li> <li>▪ Alpine butterfly</li> <li>▪ Water knot / Tape knot / Flat knot</li> <li>▪ unter hitch</li> <li>▪ Prussic hitch</li> <li>▪ Girth hitch</li> </ul> </li> <li>○ Equipment used in the high angle rescue environment</li> <li>○ Personal protective equipment <ul style="list-style-type: none"> <li>▪ Identify the points that should be taken into consideration when selecting: <ul style="list-style-type: none"> <li>▪ Helmet and headgear</li> <li>▪ 'Shell' and 'insulated' clothing</li> <li>▪ Hand and foot protection</li> <li>▪ Light sources</li> <li>▪ Specialised knives</li> </ul> </li> </ul> </li> </ul> <p>List the important components to take into consideration when selecting a harness.</p> <p>Differentiate between the different classes of harnesses.</p> <p>Differentiate between a climbing harness and a harness used in rescue.</p>
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						<p>Explain the pathology of prolonged suspension in a harness.</p> <ul style="list-style-type: none"> <li>○ Rescue rope <ul style="list-style-type: none"> <li>▪ Discuss the legislation governing the use of rope in South Africa.</li> <li>▪ Identify the composition of rope under the following headings: <ul style="list-style-type: none"> <li>Synthetic fibre</li> <li>Natural fibre</li> </ul> </li> <li>▪ List the advantages and disadvantages of each rope composition.</li> <li>▪ Identify the various types of rope construction. <ul style="list-style-type: none"> <li>Laid</li> <li>Braided</li> <li>Double braided</li> <li>Kernmantle</li> </ul> </li> <li>▪ Differentiate between static and dynamic rope.</li> <li>▪ Explain how you would determine the correct rope for a specific task.</li> <li>▪ Explain the importance of the colouring of rescue rope.</li> <li>▪ Identify the different diameters of rope and accessory cord.</li> <li>▪ Define the term 'Fall Factor'</li> <li>▪ Calculate the Fall Factor to determine whether a rope should be condemned.</li> <li>▪ Explain the term 'shock loading' and the effect this will have on a rescue rope.</li> <li>▪ Differentiate between a 'rope' and 'line' in the context of high angle rescue.</li> <li>▪ Explain the importance of tagging or marking a rope.</li> <li>▪ Identify what information should</li> </ul> </li> </ul>
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							<p>be found on a rope tag.</p> <ul style="list-style-type: none"> <li>▪ Identify the storage conditions that may cause damage to a rope.</li> <li>▪ Explain the correct manner in which to store a rope.</li> <li>▪ Discuss the advantages and disadvantages of 'bagging' a rope.</li> <li>▪ Explain how to correctly inspect a rope.</li> <li>▪ List the criteria for retiring a rope.</li> <li>▪ Explain the correct manner of washing and drying a rope.</li> <li>▪ Discuss rope damage under the following headings: Harmful substances Overloading of a rope Damage from falling objects Abrasion Heat fusion 'Flash' descend Use of rope during training Rope strength loss through knots</li> <li>▪ Describe techniques for preventing abrasion on rope.</li> <li>▪ Differentiate between the following terms: Breaking strength Working strength or safe working load</li> <li>▪ Discuss the manner in which ropes are mechanically tested. Pull / tensile testing Abrasion testing</li> <li>○ Slings and webbing <ul style="list-style-type: none"> <li>▪ Explain the advantages of webbing.</li> </ul> </li> </ul>
High Angle 2	HAR02Y3	100%	0%	6	12	The aim of this module was to provide the student with the necessary insight, theoretical knowledge and	Throughout completion of this module, the following learning outcomes were achieved:

					<p>technical skills needed to function as an independent rope rescue technician. Each section had been carefully designed to provide the student with important learning tasks and experiences, each of which was linked to an expected learning outcome.</p>	<ul style="list-style-type: none"> <li>• Discuss the types, functions, construction, inspection, preparation, usage, storage and maintenance of the equipment mentioned below: <ul style="list-style-type: none"> <li>➤ Descenders: <ul style="list-style-type: none"> <li>○ Belay plates</li> <li>○ Belay tubes</li> <li>○ Auto locking devices</li> <li>○ Brake Bar Racks</li> <li>○ Alpine descenders</li> <li>○ Gold tail</li> </ul> </li> <li>➤ Rigging Equipment: <ul style="list-style-type: none"> <li>○ Anchor Plates</li> <li>○ Rigging Rings</li> <li>○ Pulleys</li> </ul> </li> <li>➤ General: <ul style="list-style-type: none"> <li>○ Haultracks</li> <li>○ Rescue mates</li> <li>○ Gold tails</li> <li>○ Winding systems</li> <li>○ Edge rollers</li> <li>○ Load cells</li> <li>○ Inertia belts</li> </ul> </li> <li>➤ Stretchers: <ul style="list-style-type: none"> <li>○ Stokes stretchers</li> <li>○ Paragard stretchers</li> <li>○ Wire basket stretchers</li> <li>○ Sked stretchers</li> <li>○ Fillers and vacuum devices</li> </ul> </li> </ul> </li> <li>• Compare the different types of stretchers with regard to their structure and functionality including the advantages and disadvantages of each in the different high angle environments.</li> <li>• Identification, inspection and use of the listed equipment.</li> <li>• Identification and inspection of the various stretchers.</li> <li>• Discuss the purpose and function of: <ul style="list-style-type: none"> <li>➤ Load-sharing anchor system</li> <li>➤ Load-distributing anchor system (previously known as a “self-</li> </ul> </li> </ul>
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						<p>equalising anchor system)</p> <ul style="list-style-type: none"> <li>• Discuss the advantages of a load-distributing anchor system.</li> <li>• Rig a load-distributing anchor system.</li> <li>• Draw and label a diagram of a load-distributing anchor system</li> <li>• Discuss the use of tag lines in high angle rescue.</li> <li>• Draw and label a lowering system (top or bottom belayed) with one, two or three stretcher jockeys.</li> <li>• Explain the principle of double person loads.</li> <li>• Discuss the importance of communication systems when lowering.</li> <li>• Discuss the principles of stretcher rigging patient packaging and medical management during a high angle rescue operation.</li> <li>• Explain the advantages and disadvantages of top and bottom belaying.</li> <li>• Rig the following lowering systems: <ul style="list-style-type: none"> <li>➤ Lower bottom belayer</li> <li>➤ Lower top belayer</li> <li>➤ Act as a stretcher jockey</li> <li>➤ Act as a safety officer for lowering systems</li> <li>➤ Coordinate a patient lower</li> </ul> </li> <li>• Select and utilise an appropriate communication system</li> <li>• Explain the principles of mechanical advantage.</li> <li>• Discuss the advantages and disadvantages of mechanical advantage systems.</li> <li>• Explain how to back up a pulley.</li> <li>• Draw and label a mechanical advantage system.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Rig the following mechanical advantage systems: <ul style="list-style-type: none"> <li>➤ 1:1</li> <li>➤ 2:1</li> <li>➤ 3:1</li> <li>➤ 4:1</li> <li>➤ 5:1</li> <li>➤ 9:1</li> </ul> </li> <li>• Create an add-on pulley system</li> <li>• Add a change-of-direction into a rigged system</li> <li>• Insert a safety back-up for a pulley or system</li> <li>• Explain step by step the procedure for reversing a system under load.</li> <li>• Explain the procedure of locking off a system.</li> <li>• Discuss a system for rating and analysing a pre rigged system.</li> <li>• Draw and label the following operational hauling systems: <ul style="list-style-type: none"> <li>➤ 3:1</li> <li>➤ 1:1</li> <li>➤ 2:1</li> <li>➤ 6:1</li> <li>➤ 9:1</li> </ul> </li> <li>• Operate a hauling system.</li> <li>• Change from a hoist to a lower and a lower to hoist under tension.</li> <li>• Utilise an add-on system.</li> <li>• Pass a knot through a hauling system.</li> <li>• Discuss the use of high wires in rescue work.</li> <li>• List the safety regulations concerning high wire angles and anchors.</li> <li>• Draw and label a simple high wire suspension system.</li> <li>• Draw and label a compound high wire suspension system.</li> <li>• Correctly rig and operate both simple and compound suspension systems.</li> <li>• Engineer a pick off using a suspension system.</li> <li>• Dismantle a suspension system.</li> </ul>
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						<ul style="list-style-type: none"> <li>• Identify and utilise an appropriate forms of communication.</li> <li>• Describe and discuss principles of rock climbing and placement of anchors in the rock face.</li> <li>• Demonstrate basic climbing and belaying techniques.</li> <li>• Demonstrate the ability to aid climb.</li> <li>• Engage and disengage artificial anchors.</li> <li>• Discuss the types, functions, construction, inspection, preparation, usage, storage and maintenance of the equipment mentioned below.</li> <li>• Compare the different types of stretchers with regard to their structure and functionality including the advantages and disadvantages of each in the different high angle environments.</li> <li>• Identification, inspection and use of the listed equipment.</li> <li>• Identification and inspection of the various stretchers.</li> <li>• Discuss the purpose and function of: <ul style="list-style-type: none"> <li>➢ Load-sharing anchor system</li> <li>➢ Load-distributing anchor system (previously known as a "self-equalising anchor system)</li> </ul> </li> <li>• Discuss the advantages of a load-distributing anchor system.</li> <li>• Rig a load-distributing anchor system.</li> <li>• Draw and label a diagram of a load-distributing anchor system</li> <li>• Discuss the use of tag lines in high angle rescue.</li> <li>• Draw and label a lowering system (top or bottom belayed) with</li> </ul>
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						<p>one, two or three stretcher jockeys.</p> <ul style="list-style-type: none"> <li>• Explain the principle of double person loads.</li> <li>• Discuss the importance of communication systems when lowering.</li> <li>• Discuss the principles of stretcher rigging patient packaging and medical management during a high angle rescue operation.</li> <li>• Explain the advantages and disadvantages of top and bottom belaying.</li> <li>• Rig lowering systems</li> <li>• Select and utilise an appropriate communication system.</li> <li>• Explain the principles of mechanical advantage.</li> <li>• Discuss the advantages and disadvantages of mechanical advantage systems.</li> <li>• Explain how to back up a pulley.</li> <li>• Draw and label a mechanical advantage system.</li> <li>• Rig mechanical advantage systems.</li> <li>• Create an add-on pulley system</li> <li>• Add a change-of-direction into a rigged system</li> <li>• Insert a safety back-up for a pulley or system</li> <li>• Explain step by step the procedure for reversing a system under load.</li> <li>• Explain the procedure of locking off a system.</li> <li>• Discuss a system for rating and analysing a pre rigged system.</li> <li>• Draw and label operational hauling systems.</li> <li>• Operate a hauling system.</li> <li>• Change from a hoist to a lower and a lower to hoist under tension.</li> <li>• Utilise an add-on system.</li> <li>• Pass a knot through a hauling system.</li> <li>• Discuss the use of high wires in rescue work.</li> </ul>
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							<ul style="list-style-type: none"> <li>• List the safety regulations concerning high wire angles and anchors.</li> <li>• Draw and label a simple high wire suspension system.</li> <li>• Draw and label a compound high wire suspension system.</li> <li>• Correctly rig and operate both simple and compound suspension systems.</li> <li>• Engineer a pick off using a suspension system.</li> <li>• Dismantle a suspension system.</li> <li>• Identify and utilise an appropriate forms of communication.</li> <li>• Describe and discuss principles of rock climbing and placement of anchors in the rock face.</li> <li>• Demonstrate basic climbing and belaying techniques.</li> <li>• Demonstrate the ability to aid climb.</li> <li>• Engage and disengage artificial anchors.</li> </ul>
Industrial & Agricultural Rescue	IAR01Y2	100%	0%	6	3	<p>This module provided the student with the necessary knowledge, skills and techniques to access and extricate entrapped victims involved in machinery, equipment and vehicles found in the rural agricultural and industrial environments. The module focused on the unique situations that are found in the various sectors of industry and in agriculture. The majority of the rescue equipment used to extricate patients had been dealt with in previous sections so it was not discussed</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>○ Identify the various types of vehicles and machinery found in the industrial and agricultural environments.</li> <li>○ Identify the potential emergency scenarios that may occur with the some of the basic anatomy of vehicles and machinery found in the industrial and agricultural environments.</li> <li>○ List the questions that should be asked when carrying out an initial size-up of an industrial or agricultural incident.</li> <li>○ Discuss the considerations for</li> </ul>

						<p>in detail in this module.</p> <p>industrial and agricultural vehicle stabilisation under the following headings:</p> <ul style="list-style-type: none"> <li>○ Vehicle upright</li> <li>○ Vehicle on its side</li> <li>○ Vehicle upside down</li> <li>○ Vehicle in other positions</li> <li>○ Explain ways of gaining access into industrial and agricultural rescue vehicles.</li> <li>○ Discuss incidents related to the 'Power-take-off' system found the agricultural environment.</li> <li>○ Discuss the importance of a pre-incident planning for industrial and agricultural machinery extrication incidents.</li> <li>○ Explain the importance of using lock-out/tag-out devices.</li> <li>○ Discuss the primary and secondary assessments that are carried out during Phase I (Assessment on Arrival) of an industrial and agricultural incident.</li> <li>○ Discuss Phase II (Pre-extrication Operations) at an industrial and agricultural incident under the following headings: <ul style="list-style-type: none"> <li>○ Monitoring patient status</li> <li>○ Finalising incident action plan</li> <li>○ Gathering resources</li> <li>○ Monitoring the atmosphere</li> <li>○ Ventilation considerations</li> <li>○ Lighting</li> <li>○ Communications</li> </ul> </li> <li>○ List the four major factors that need to be considered during Phase III (Machinery Extrication Operations)</li> </ul>
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						<p>at an industrial and agricultural incident.</p> <ul style="list-style-type: none"> <li>○ Discuss ways in which a machine can be stabilised.</li> <li>○ Identify ways in which to isolate energy sources of a machine.</li> <li>○ Explain what is meant by the term 'manipulative extrication' at industrial and agricultural incidents.</li> <li>○ Discuss the approach to disassembling a machine for the extrication of a patient at an industrial and agricultural incident.</li> <li>○ Discuss the use of force to manipulate components of a machine for the extrication of a patient at an industrial and agricultural incident.</li> <li>○ List the considerations that should be taken when terminating an industrial and agricultural incident.</li> <li>○ Explain the correct management of an incident involving an escalator</li> <li>○ Discuss the dangers associated with elevator / lift rescues</li> <li>○ Label the main components of an elevator system</li> <li>○ Explain how to disable and lock out an elevator</li> <li>○ Explain the correct methods for gaining access to a lift between floors</li> <li>○ Explain the general management of a rescue from a lift shaft</li> <li>○ Discuss the management of an incident involving a child who has become trapped between the burglar bars of a house</li> <li>○ Discuss the management of an</li> </ul>
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						<p>incident involving pool weirs and pumps</p> <ul style="list-style-type: none"> <li>○ Discuss the dangers associated with electrically operated doors and gates</li> <li>○ Explain the general management principles of dealing with a person who has become trapped by an electrically operated door or gate</li> <li>○ Discuss the general management of a chemical spill or leak in a rural area</li> <li>○ Discuss the dangers associated with grain storage silos and bins</li> <li>○ Explain the management of an incident where a patient has become buried under the grain in a silo or bin.</li> </ul>
Intensive and Specialized Care	EMC01Y4	100%	0%	8	12	<p>The purpose of studying Intensive &amp; Specialised Care was to develop and demonstrate the following broad outcomes on the culmination of the student's learning activities:</p> <ul style="list-style-type: none"> <li>○ Discuss the basic principles and approaches to assessing, preparing and transferring a critically ill or injured patient in a mobile ICU.</li> <li>○ Demonstrate correct and appropriate usage and problem solving with regard to monitoring and other equipment used during ICU transfers.</li> <li>○ Explain the rationale for, the possible complications of and the various</li> </ul>

Throughout completion of this module, the following learning outcomes were achieved:

General

- Discuss the functioning and need for intensive care units (ICUs) and factors determining the need for transfer from one ICU to another.

Ventilation

- Discuss the indications for and purpose of mechanical ventilation.
- Differentiate between volume-, pressure- and time-cycled ventilation and describe the advantages and disadvantages of each.
- Explain and compare the different modes of mechanical ventilation including intermittent mandatory ventilation (IMV), continuous mandatory ventilation (CMV), synchronised intermittent mandatory ventilation (SIMV),

						<p>approaches to thrombolysis in the pre-hospital environment.</p> <ul style="list-style-type: none"> <li>○ Critically discuss the evidence for pre-hospital thrombolysis.</li> <li>○ Describe the causes, pathophysiology and clinical features of a broad range of diving-related emergencies.</li> <li>○ Critically discuss and defend various management approaches for the diving-related emergencies mentioned above.</li> <li>○ Discuss the possible stresses, complications and risks of transporting critically ill or injured patients by air as well as the advantages and disadvantages of doing this.</li> <li>○ Describe the general management of critically ill or injured patients during air transportation and characteristics of various types of aircraft used for this purpose.</li> </ul>	<p>pressure support ventilation (PSV), biphasic positive airway pressure (BiPAP), bi-level positive airway pressure (BiPAP) and airway pressure release ventilation (APRV).</p> <ul style="list-style-type: none"> <li>• Discuss manipulation of various ventilation parameters (depending on the mode) such as (but not limited to) ventilation rate, tidal volume, minute volume, flow, positive endexpiratory pressure (PEEP), inspiratory: expiratory ratio, trigger, pressure support, maximum/peak airway pressure, plateau, slope and FiO<sub>2</sub> in adults and children in a variety of clinical contexts</li> <li>• Demonstrate the setup and monitoring of a mechanical ventilator in relation to the modes and parameters above (those relevant to the ventilator being used).</li> <li>• Interpret ventilation flow-volume loops and relate these to the mode of ventilation, adequacy of ventilation and condition of the patient.</li> <li>• Discuss the importance of correctly setting ventilator alarms and provide sample values for a variety of alarm parameters for adults and children.</li> <li>• Describe the process of monitoring a ventilated patient using pulse oximetry, capnography and arterial blood gas (ABG) analysis (see specific outcomes for ABG below).</li> <li>• Troubleshoot a range of situations related to alarms and patient-ventilator problems.</li> <li>• Discuss the risk-factors for and pathogenesis of ventilator-associated lung injury (VALI).</li> <li>• Describe protective ventilation strategies</li> </ul>
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						<p>that can be used in order to minimise the risk of VALI.</p> <ul style="list-style-type: none"> <li>• Discuss factors affecting the readiness of a patient for weaning from mechanical ventilation and the processes and monitoring to be carried out when weaning.</li> <li>• Describe non-invasive ventilation (NIV) by referring to its indications, contra-indications and modes.</li> <li>• Demonstrate the setup and monitoring of NIV using a mechanical ventilator.</li> </ul> <p>Arterial Blood Gas Analysis</p> <ul style="list-style-type: none"> <li>• Explain the role played by ABG analysis in monitoring of the critically ill patient.</li> <li>• Discuss the importance of pH, PaO<sub>2</sub>, PaCO<sub>2</sub>, HCO<sub>3</sub><sup>-</sup> and base excess in analysis of an arterial blood sample.</li> <li>• Identify respiratory and metabolic acidosis and alkalosis, and mixed acid-base disorders, from a blood gas report based upon the parameters given above and clinical patient data.</li> <li>• Demonstrate how to obtain an arterial blood sample for ABG analysis</li> </ul> <p>Monitoring</p> <ul style="list-style-type: none"> <li>• Discuss the role of ECG, arterial oxygen saturation, end-tidal CO<sub>2</sub>, non-invasive blood pressure and body temperature monitoring in routine critical patient care.</li> <li>• Discuss the role of invasive haemodynamic monitoring and the routine care of arterial vascular lines and their attachments.</li> <li>• Discuss the role of central venous access</li> </ul>
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						<p>and monitoring and the routine care of central venous lines and their attachments.</p> <p>Infusions</p> <ul style="list-style-type: none"> <li>• Flow rates and required drug volumes and concentrations for drug delivery with a syringe driver or infusion pump are accurately calculated.</li> <li>• A syringe driver and infusion pump is used to effectively deliver a drug at a prescribed infusion rate.</li> <li>• A syringe driver and infusion pump is effectively managed with regard to troubleshooting techniques.</li> <li>• The role of nasogastric feeds and TPN, as well as the care and monitoring of these during transfer, is briefly discussed.</li> </ul> <p>Fluid Balance</p> <ul style="list-style-type: none"> <li>• Discuss the fluid requirements of critically ill patients including those post-surgery and those with trauma, burns, metabolic disorders and sepsis.</li> <li>• Describe the appropriate choice of fluids for resuscitation of the above patients, and the strategies to be employed with regard to fluid resuscitation in these situations.</li> <li>• Explain the basic procedures of fluid intake and output monitoring and documentation.</li> </ul> <p>Intra-aortic Balloon Pump</p> <ul style="list-style-type: none"> <li>• Describe indications for and the placement and functioning of an intra-aortic balloon pump (IABP).</li> <li>• Discuss the routine monitoring of a patient</li> </ul>
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						<p>with a IABP in situ during transfer.</p> <ul style="list-style-type: none"> <li>Describe the steps to be taken to troubleshoot specific problems that may occur with a IABP during transfer.</li> </ul> <p>Imaging</p> <ul style="list-style-type: none"> <li>Demonstrate accurate interpretation of a chest radiograph.</li> </ul> <p>General Care</p> <ul style="list-style-type: none"> <li>Discuss factors responsible for the formation of pressure ulcers in critically ill patients and how these can be avoided during transfer.</li> <li>Explain the importance of maintaining a neutral thermal environment during transfer and how to achieve this.</li> <li>Describe the general care principles of intercostal and other drains, and wound dressings during transfer</li> </ul> <p>Preparation for Transfer, Transfer and Handover</p> <ul style="list-style-type: none"> <li>Demonstrate effective patient assessment, accumulation of data from all sources, patient packaging and decision-making in preparation for an ICU transfer.</li> <li>Discuss the haemodynamic and other changes that patients may experience during road transportation and the effects that these may have.</li> <li>Explain the decision-making and consultative steps to be taken if a patient suddenly deteriorates during transfer and requires resuscitation or other non-standing order treatment.</li> <li>Describe the features of a fully comprehensive handover, including all</li> </ul>
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						<p>documentation, of a patient at a receiving facility after an ICU transfer.</p> <p>Pre-hospital thrombolysis</p> <ul style="list-style-type: none"> <li>• Define the term thrombolysis and give an overview of the theoretical benefits and complications of thrombolytic therapy.</li> <li>• Discuss the therapeutic role played by thrombolytic therapy in the treatment of myocardial infarction (MI) and related acute coronary syndromes.</li> <li>• Critically evaluate scientific literature either supporting or refuting the safety and effectiveness of pre-hospital thrombolysis by non-physician, independent practitioners.</li> <li>• Discuss the theoretical benefits of initiating thrombolytic therapy in the pre-hospital environment.</li> <li>• Describe the thrombolytic drugs in common usage under the following headings: mechanism of action; indications; contra-indications; precautions and drug interactions.</li> <li>• Describe the most recent, accepted thrombolysis regimens and referring to published evidence, evaluate their appropriateness within the pre-hospital context.</li> <li>• Discuss the common complications of thrombolysis, particularly in the pre-hospital environment, and approaches that may mitigate against these complications.</li> <li>• Demonstrate sound clinical decision-making with regard to patient selection for prehospital thrombolysis, using clinical scenarios</li> </ul>
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						<p>(including possible interpretation of a 12-lead electrocardiogram in each case).</p> <p>Principles of aeromedical transport</p> <ul style="list-style-type: none"> <li>• Briefly describe the history and background of rotor and fixed wing medical evacuation, internationally and locally.</li> <li>• Discuss the advantages of aero-medical evacuation, both in terms of primary response and inter-facility transfer and refer to any scientific evidence in this regard.</li> <li>• Give an overview of the characteristics and capabilities of current South African role players in the aero-medical evacuation field.</li> <li>• Discuss legislative, educational, registration and any other relevant requirements applicable to South African aero-medical evacuation organisations and medical personnel.</li> <li>• Briefly describe the processes involved in receiving, dispatching, following and terminating an aero-medical mission – both rotary and fixed wing.</li> <li>• Discuss commonly used dispatch criteria for rotary and fixed wing missions.</li> <li>• Describe conditions or situations where air evacuation would be inappropriate.</li> <li>• Describe the safety precautions and procedures to be adhered to when operating near both rotary and fixed wing aircraft.</li> <li>• Explain how to set up both day and night helicopter landing zones and how to control these landing zones in a safe</li> </ul>
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						<p>way during approach, landing, loading and take-off.</p> <ul style="list-style-type: none"> <li>• Discuss the composition of the atmosphere and characteristics of its different layers.</li> <li>• State the gas laws (Boyle's, Charles', Dalton's, Henry's, ideal) and give examples of how these are applicable to functioning and caring for patients at altitude.</li> <li>• Relate the gas laws specifically to the effects of cabin pressurisation and sudden loss thereof.</li> <li>• Describe the effects of increasing altitude on oxygenation and human functioning related to hypoxia.</li> <li>• Describe the stresses of flight and highlight ways in which any of these stresses could be minimised.</li> <li>• Discuss the effects of various other factors (e.g. medication, fatigue etc) on human performance at altitude and identify substances or activities that must be avoided prior to or during flight.</li> <li>• Explain general steps to be taken in accomplishing effective: <ul style="list-style-type: none"> <li>○ Handover from hospital staff on arrival;</li> <li>○ Preparation of a patient for aero-medical evacuation;</li> <li>○ Care and monitoring during flight;</li> <li>○ Transfer to the receiving hospital (if applicable);</li> <li>○ Handover to the receiving hospital staff;</li> <li>○ Documentation;</li> </ul> </li> <li>• Discuss the legal and procedural consequences and approaches to the</li> </ul>
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						<p>declaration of death in flight.</p> <p>Diving Emergencies</p> <ul style="list-style-type: none"> <li>• Define the following terms: <ul style="list-style-type: none"> <li>○ SCUBA;</li> <li>○ Closed circuit rebreather ;</li> <li>○ Surface supply diving</li> </ul> </li> <li>• Calculate the pressures that water exerts on the body at different depths.</li> <li>• Explain, in general terms, how diving tables work.</li> <li>• Discuss the various gas laws (Boyle, Henry and Dalton) and explain how different gases, especially nitrogen and oxygen are affected at different depths.</li> <li>• Calculate the partial pressures of common gases at various depths.</li> <li>• Calculate air consumption and gas volumes in different size pressure vessels.</li> <li>• Identify important information to obtain when interviewing a patient that suffers from a diving related emergency</li> <li>• Explain the significance of the following diving activities on patients suffering from a diving-related emergency: <ul style="list-style-type: none"> <li>○ Exceeding recommended total bottom time, or prolonged total bottom time at depth;</li> <li>○ Multilevel dives;</li> <li>○ Repeated dives and time frames between dives;</li> <li>○ Missed decompression and safety stops;</li> <li>○ Diving at altitude ;</li> <li>○ Diving in cold water;</li> <li>○ Travelling after diving ;</li> <li>○ Rapid ascent;</li> </ul> </li> <li>• Discuss the pathology, clinical features and</li> </ul>
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							<p>management of the following disorders:</p> <ul style="list-style-type: none"> <li>○ Squeeze and reverse squeeze;</li> <li>○ Barotrauma of ears, teeth and sinuses;</li> <li>○ Nitrogen narcosis;</li> <li>○ Decompression sickness;</li> <li>○ Lung hyperinflation syndrome;</li> <li>○ Surgical emphysema;</li> <li>○ Pneumothorax and tension pneumothorax;</li> <li>○ Arterial gas embolism;</li> </ul> <ul style="list-style-type: none"> <li>• Explain the relationship between decompression sickness and decompression illness.</li> <li>• Define the term shallow water blackout.</li> <li>• List the risk factors for shallow water blackout.</li> <li>• Explain how shallow water blackout occurs, at depth and due to hyperventilation.</li> <li>• Discuss the management of a patient suffering from shallow water blackout.</li> </ul>
Mental Health and Wellness	MHW1BB1	100%	0%	6	6	<p>The purpose of this module was to educate the student in personal health and wellness and prepare them to manage themselves for the adverse circumstances facing them as paramedics (that may put them at personal and professional risk). It was specifically designed to assist the student in managing stress and preventing burnout and to assist them to manage themselves and interactions with others effectively so as to maximize their effective functioning</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Show evidence of an awareness of your personal challenges with respect to stress management and possible solutions to these.</li> <li>• Demonstrate knowledge of strategies for conflict management within yourself and in interaction with others.</li> <li>• Know the definitions and symptoms/ signs/ preventative and treatment measures applicable, for the following:</li> </ul>

						<p>as a paramedic both on duty and in order to maintain a level of healthy functioning off duty. The purpose was, furthermore, to provide the student with theory as well as practical working tools with which to apply this knowledge to their individual lives in a practical and real way. The course was designed to develop the students personal monitoring and observation skills and to extend their interpersonal management abilities. The module was designed to extend the student's knowledge of substance abuse and the grieving process so that they are better able to understand the real dangers of ineffective stress relief and so that they can understand their own and other's natural reactions and processes related to death and dying.</p>	<ul style="list-style-type: none"> <li>➤ Post Traumatic Stress Disorder (PTSD)</li> <li>➤ Substance abuse</li> <li>➤ Depression</li> <li>➤ Anxiety</li> <li>➤ Stress</li> <li>➤ Burnout</li> </ul> <ul style="list-style-type: none"> <li>• Explain the grief process as described by Kubler-Ross.</li> <li>• Apply your knowledge of any of the above sections to your personal and professional life challenges.</li> <li>• Show an understanding of how the various aspects of this course relate to each other.</li> </ul>
Motor Vehicle Rescue	MVR01Y2	100%	0%	6	12	<p>The purpose of this module was to provide the student with the knowledge, skills and techniques to extricate entrapped victims involved in land-based vehicle collisions. The module focused on the fundamentals of vehicle anatomy and new car technology, collision trauma and the management of a vehicle accident. The techniques and equipment used to extricate patients were dealt with in detail during this module.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Vehicle rescue safety and the management of an extrication incident <ul style="list-style-type: none"> <li>○ Identify the points that should be taken into consideration when choosing the following personal protective equipment (PPE) items that are used by operational personnel at a vehicle rescue incident: <ul style="list-style-type: none"> <li>▪ Helmet</li> <li>▪ Hearing protection</li> <li>▪ Eye protection</li> </ul> </li> </ul> </li> </ul>

							<ul style="list-style-type: none"> <li>▪ Respiratory protection</li> <li>▪ Protective clothing</li> <li>▪ Protective footwear</li> <li>▪ Protective handwear</li> <li>▪ Universal precautions against blood-borne pathogens</li> <li>○ Discuss extrication incident safety under the following headings: <ul style="list-style-type: none"> <li>▪ Importance of Training</li> <li>▪ Operational Assignments</li> <li>▪ Medical Component or Medical Standby</li> <li>▪ Rehabilitation Station</li> <li>▪ Mitigation of Potential Hazards</li> <li>▪ Appointment of a Safety Officer</li> <li>▪ Effective Personnel Accountability</li> </ul> </li> <li>○ Identify safety hazards related to a vehicle rescue incident.</li> <li>○ Explain how to mitigate or remove these hazards.</li> <li>○ Discuss what should be implemented when planning a response to an extrication incident.</li> <li>○ List the pertinent questions that should be asked by the person taking charge of the incident.</li> <li>○ List the critical decisions that need to be made by the</li> </ul>
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							<p>person taking charge of the incident.</p> <ul style="list-style-type: none"> <li>○ Discuss the factors that need to be considered during a scene size-up, at an extrication incident, under the following headings: <ul style="list-style-type: none"> <li>▪ Scene assessment</li> <li>▪ Assessment of vehicles involved</li> <li>▪ Assessment of patients</li> <li>▪ Extrication assessment</li> <li>▪ Resource assessment</li> <li>▪ Patient removal assessment</li> </ul> </li> <li>○ Identify scenarios where outside assistance may be needed to support the teams on an incident.</li> <li>○ Explain the importance of shelter and thermal control on a vehicle rescue scene.</li> <li>○ Illustrate the placement of emergency vehicles on an incident to ensure the scene is adequately protected.</li> <li>○ Illustrate the placement of road cones in order to channel vehicles safely in the following circumstances: <ul style="list-style-type: none"> <li>▪ Straight road – multiple lanes</li> <li>▪ Straight road – single lane</li> <li>▪ Corner</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Blind rise</li> <li>▪ Intersections and junctions</li> <li>▪ Highways</li> </ul> <ul style="list-style-type: none"> <li>○ List the factors and conditions that need to be considered when controlling traffic and scene safety.</li> <li>○ Explain how you would use 'control zones' to avoid congestion and confusion around an extrication incident</li> <li>○ Explain the importance of identifying evacuation routes on an extrication incident.</li> <li>○ Discuss the steps that will be taken to plan for the extrication when you arrive on scene.</li> <li>○ Discuss what will be done in order to terminate the incident.</li> </ul> <ul style="list-style-type: none"> <li>• Vehicle anatomy and new care technology considerations <ul style="list-style-type: none"> <li>○ Identify the common terms used to identify the various areas of a vehicle.</li> <li>○ Explain the importance of having generic terms for parts of a vehicle in rescue scenarios.</li> <li>○ Identify the different types of vehicle frames used in construction of the car.</li> <li>○ Explain why it is important to know the effect the vehicle's frames have on the overall structural integrity of the vehicle.</li> </ul> </li> </ul>
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							<p>associated with patients and</p> <ul style="list-style-type: none"> <li>○ Describe the kinematics of injury under the following headings: <ul style="list-style-type: none"> <li>▪ Front-impact collision</li> <li>▪ Rear-impact collision</li> <li>▪ Side-impact collision</li> <li>▪ Rollover</li> <li>▪ Under-ride and Over-ride</li> <li>▪ Rotational</li> </ul> </li> <li>○ Explain the expected injuries in the following collision types: <ul style="list-style-type: none"> <li>▪ Head-on impact collision</li> <li>▪ Side-impact collision</li> <li>▪ Rear impact collision</li> <li>▪ Rotational impact collision</li> <li>▪ Rollover</li> </ul> </li> <li>○ Describe entrapment problems anticipated with each basic type of motor vehicle crash involving occupants in various locations within the vehicle at the time of the collision.</li> <li>● Vehicle rescue tools and equipment <ul style="list-style-type: none"> <li>○ Identify the following types of extrication related tools and equipment. <ul style="list-style-type: none"> <li>▪ Stabilization equipment</li> <li>▪ Hand tools</li> <li>▪ Pneumatic power tools</li> </ul> </li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Pneumatic lifting bags</li> <li>▪ Electric tools</li> <li>▪ Hydraulic tools</li> <li>▪ Power saws</li> <li>▪ Thermal cutting devices</li> <li>▪ Lifting and pulling tools</li> </ul> <ul style="list-style-type: none"> <li>○ Identify the components of the aforementioned extrication related tools and equipment.</li> <li>○ List the pre-use operational checks that should be done on the aforementioned extrication related tools and equipment.</li> <li>○ Discuss the care and maintenance of the aforementioned extrication related tools and equipment.</li> </ul> <ul style="list-style-type: none"> <li>• Extrication techniques <ul style="list-style-type: none"> <li>○ Explain the importance of the stabilization of a vehicle during motor vehicle collision incidents.</li> <li>○ Describe the basic principle of vehicle stabilisation.</li> <li>○ Explain the fundamentals of stabilisation under the following headings: <ul style="list-style-type: none"> <li>▪ Vehicle upright</li> <li>○ Vehicle on its side</li> <li>▪ Vehicle on its roof</li> <li>▪ Vehicles in other positions</li> <li>▪ Use of recovery vehicles (towing vehicles or cranes)</li> </ul> </li> <li>○ List reasons for using lifting techniques at the vehicle rescue incidents.</li> </ul> </li> </ul>
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						<ul style="list-style-type: none"> <li>○ List the precautions that should be taken when using chains at vehicle rescue incidents.</li> <li>○ Identify the different types of wire rope construction.</li> <li>○ List the considerations that should be taken when deciding to retire a wire rope.</li> <li>○ Discuss reasons why slings would be advantageous when used in the vehicle rescue environment.</li> <li>○ Identify the various hitches used during vehicle rescue.</li> <li>○ Identify the various types of rigging fitting that are used in combination with chains, rope wires and slings.</li> <li>○ Discuss ways to protect the patient and rescuers during the removal of glass.</li> <li>○ Explain ways that you can 'try-before-you-pry' in order to create openings for patient access.</li> <li>○ Explain the reason for creating a 'purchase point' during the removal of a panel or door during vehicle extrication.</li> <li>○ List safety considerations that should be taken when forcing a door during extrications.</li> <li>○ Identify the Nader pin and door latch on a vehicle.</li> <li>○ Discuss the difference between a full 'roof removal' and a 'roof flap.'</li> <li>○ Discuss the circumstances when you would preferably lift a dashboard as opposed to 'rolling' it.</li> </ul>
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						<ul style="list-style-type: none"> <li>○ Discuss the circumstances when you would remove a seat during an extrication.</li> <li>○ Identify the vehicle extrication progression system using ABCDEF acronym.</li> <li>• Practical skills outcomes <ul style="list-style-type: none"> <li>○ Act in a safe manner during all motor vehicle rescue training scenarios.</li> <li>○ Correctly don and doff all PPE used for motor vehicle rescue.</li> <li>○ Stage an area for all motor vehicle rescue equipment during training.</li> <li>○ Fulfil the role of each member within a motor vehicle rescue team.</li> <li>○ Correctly complete a scene assessment, including circle surveys, and report findings to the rescue team leader.</li> <li>○ Mitigate all identified safety hazards using recognised techniques.</li> <li>○ Correctly stabilise a vehicle using the following equipment: <ul style="list-style-type: none"> <li>▪ Cribbing</li> <li>▪ Chocks and wedges</li> <li>▪ Chains</li> <li>▪ Slings</li> <li>▪ Wire rope</li> <li>▪ Pneumatic airbags</li> <li>▪ Pneumatic stabilising struts</li> </ul> </li> <li>○ Gain access to entrapped patients quickly and safely to provide medical group route of entry to provide patient care.</li> <li>○ Provide patient care and stabilization according</li> </ul> </li> </ul>
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						<p>to the medical group's scope of practice</p> <ul style="list-style-type: none"> <li>○ Correctly remove laminated glass using the following equipment: <ul style="list-style-type: none"> <li>▪ Commercial windshield removal tool</li> <li>▪ Reciprocating saw</li> <li>▪ Air chisel</li> </ul> </li> <li>○ Correctly remove tempered glass using the following equipment: <ul style="list-style-type: none"> <li>▪ Spring-loaded centre punch</li> <li>▪ Halligan tool</li> </ul> </li> <li>○ Correctly carryout the following rescue techniques using safe and effective methods: <ul style="list-style-type: none"> <li>▪ Opening of bonnet</li> <li>▪ Opening of trunk/boot</li> <li>▪ Front door removal</li> <li>▪ Rear door removal</li> <li>▪ Total sidewall removal</li> <li>▪ Full roof removal</li> <li>▪ Entry through roof with vehicle on its side</li> <li>▪ Lifting of steering column</li> <li>▪ Lifting of dashboard</li> <li>▪ Rolling of steering column</li> <li>▪ Rolling of dashboard</li> <li>▪ Floor pan drop</li> <li>▪ Seat displacement</li> <li>▪ Seat removal</li> <li>▪ Pedal cutting</li> </ul> </li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Displacement of pedal</li> <li>○ Correctly care for, and maintain all equipment used for extrication scenarios.</li> <li>○ Package a patient for removal in a safe and effective manner.</li> <li>○ Select an appropriate route of egress to remove the patient safely.</li> <li>○ Correctly clean a scene of a vehicle rescue to ensure safety to the public once the rescue has been completed.</li> </ul>
Paediatric and Neonatal Emergency Care	EMC02Y4	100%	0%	8	12	<p>The purpose of studying Paediatric &amp; Neonatal Emergency Care is to develop and demonstrate the following broad outcomes on the culmination of your learning activities:</p> <ul style="list-style-type: none"> <li>• Discuss the basic principles of history taking and clinical assessment in paediatric patients, with particular reference to anatomical and physiological differences across paediatric age groups.</li> <li>• Demonstrate effective and clinically useful history taking in paediatric patients.</li> <li>• Identify the hypoxic or shocked paediatric patient through a well-</li> </ul>	<ul style="list-style-type: none"> <li>▪ Give a logical approach to the classification of paediatric patients into various categories based on age group (premature, newborn, neonate, infant, child, adolescent) and define the transition between paediatric and adult categories.</li> <li>▪ Explain important differences between adult and paediatric physical examination, specifically examination of the head, neck, chest and abdomen.</li> <li>▪ Discuss strategies and limitations of history taking in various paediatric age groups.</li> <li>▪ Describe and/or demonstrate ALS resuscitation of paediatric patients, specifically newborn, neonate, infant and child resuscitation. This includes diagnosis and treatment of cardiac arrest, peri-arrest arrhythmias (bradycardia, narrow- and wide-complex tachycardias) and post-resuscitation care. [Refer to HPCSA ALS protocols]</li> <li>▪ Demonstrate the following isolated</li> </ul>

						<p>structured, targeted clinical examination.</p> <ul style="list-style-type: none"> <li>• Discuss and demonstrate effective application of basic and advanced life support resuscitation algorithms and skills for newborns, infants and children.</li> <li>• Describe the aetiology, clinical features and management of a range of emergencies in neonates.</li> <li>• Describe the aetiology, clinical features and management of a range of emergencies in infants and children.</li> <li>• Discuss the recognition and reporting of child abuse and neglect, in addition to principles of acute treatment.</li> <li>• Discuss the epidemiology of paediatric HIV/AIDS in South Africa and the most common associated presenting clinical conditions.</li> </ul>	<p>resuscitation skills in paediatric patients, either simulated or real:</p> <ul style="list-style-type: none"> <li>o Bag-valve-mask ventilation;</li> <li>o Endotracheal intubation;</li> <li>o Intraosseous infusion;</li> <li>o Defibrillation, cardioversion &amp; pacing;</li> <li>o Umbilical vein catheterisation;</li> <li>o Management of suspected meconium aspiration;</li> </ul> <p><i>SIDS</i></p> <ul style="list-style-type: none"> <li>▪ Define SIDS.</li> <li>▪ Discuss putative aetiological factors.</li> <li>▪ Describe current theories concerning the causation and pathophysiology of SIDS.</li> <li>▪ Explain the decision-making process with regard to viability of a paediatric resuscitation within the context of a SIDS case, but also in general terms.</li> </ul> <p><i>The Premature Neonate</i></p> <ul style="list-style-type: none"> <li>▪ Define prematurity and discuss the challenges and probable complications specific to pre-hospital care of the premature neonate.</li> <li>▪ Give a systematic account of routine steps to be taken in the pre-hospital care of a premature neonate.</li> </ul> <p><i>Neonatal Asphyxia</i></p> <ul style="list-style-type: none"> <li>▪ Differentiate between primary and secondary apnoea.</li> <li>▪ Describe risk factors for the development of primary and secondary apnoea.</li> <li>▪ Explain the principles of pre-hospital treatment for both forms of apnoea, emphasising the principle of the 'inverted pyramid'.</li> </ul> <p><i>Respiratory Distress Syndrome</i></p> <ul style="list-style-type: none"> <li>▪ Define RDS.</li> <li>▪ Name aetiological factors associated with</li> </ul>
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							<p>RDS.</p> <ul style="list-style-type: none"> <li>▪ Explain the pathophysiology of RDS, specifically effects on pulmonary mechanics, gas exchange and acid-base balance.</li> <li>▪ Describe the clinical features of RDS and differentiate between RDS and TTN.</li> <li>▪ Discuss principles of pre-hospital treatment for RDS.</li> </ul> <p><i>Meconium Aspiration</i></p> <ul style="list-style-type: none"> <li>▪ Describe the composition of meconium, physiological aspects related to its formation in normal term gestation and factors predisposing to aspiration of meconium.</li> <li>▪ Identify diagnostic features of meconium aspiration in a newborn.</li> <li>▪ Give a stepwise explanation of the procedure to be followed in resuscitating a newborn with meconium aspiration.</li> <li>▪ Specifically, discuss the role of suctioning of the respiratory tract in meconium aspiration and contrast this with the role of suctioning of the respiratory tract in a newborn without meconium aspiration (i.e. also discuss the negative effects of overzealous routine suctioning).</li> </ul> <p><i>Safe Transfer of the Sick Neonate</i></p> <ul style="list-style-type: none"> <li>▪ Discuss the importance of communication and documentation in neonatal transfer cases, and the role of each team member in this respect.</li> <li>▪ Describe the principles of neonatology relevant to patient stabilisation of patients prior to transport, and explain why stabilisation is important prior to</li> </ul>
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						<p>movement of these critically ill patients.</p> <ul style="list-style-type: none"> <li>▪ Give examples of crises that could occur during neonatal transfer and discuss how each of these should be handled.</li> <li>▪ Discuss the importance of family support before, during and after neonatal transfer.</li> </ul> <p><i>Pneumonia</i></p> <ul style="list-style-type: none"> <li>▪ Discuss the incidence and epidemiology of pneumonia amongst paediatric patients.</li> <li>▪ Name the commonly implicated causative pathogens in different age groups.</li> <li>▪ Briefly describe the pathophysiology of the most commonly encountered types of bacterial pneumonia.</li> <li>▪ Name clinical features associated with the most commonly encountered types of bacterial pneumonia.</li> <li>▪ Discuss principles of pre-hospital supportive treatment for the most commonly encountered types of bacterial pneumonia.</li> </ul> <p><i>Asthma</i></p> <ul style="list-style-type: none"> <li>▪ Discuss the incidence and epidemiology of childhood asthma.</li> <li>▪ Name the commonly implicated aetiological factors for acute asthma attacks in childhood.</li> <li>▪ Describe the pathophysiology of an acute asthma attack.</li> <li>▪ List the clinical features of an acute asthma attack, emphasising differences between paediatric and adult forms of the disease.</li> <li>▪ Define status asthmaticus and explain factors contributing to the high mortality associated with this condition.</li> <li>▪ Discuss principles of pre-hospital treatment for an acute asthma attack and status</li> </ul>
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						<p>asthmaticus. [Refer to HPCSA ALS protocols]</p> <p><i>Anaphylaxis</i></p> <ul style="list-style-type: none"> <li>Describe the most common causative factors for anaphylaxis occurring in paediatric patients and list the diagnostic features of this condition.</li> <li>Clinically distinguish between anaphylaxis with upper airway involvement, lower airway involvement and cardiovascular involvement.</li> <li>Discuss principles of pre-hospital treatment for anaphylaxis with any one or more of the above features. [Refer to HPCSA ALS protocols]</li> </ul> <p><i>Bronchiolitis</i></p> <ul style="list-style-type: none"> <li>Discuss the incidence and epidemiology of bronchiolitis.</li> <li>Name the commonly implicated aetiological factors for bronchiolitis.</li> <li>Describe the pathophysiology of bronchiolitis.</li> <li>List the clinical features of bronchiolitis.</li> <li>Discuss principles of pre-hospital treatment for bronchiolitis.</li> </ul> <p><i>Laryngotracheobronchitis (LTB) &amp; Epiglottitis</i></p> <ul style="list-style-type: none"> <li>Define LTB and epiglottitis.</li> <li>Differentiate between LTB and epiglottitis by referring to typical patient age distributions for each, causative organisms and differential clinical features.</li> <li>Describe the pathophysiology of both conditions.</li> <li>Grade LTB into mild, moderate and severe using various clinical features.</li> <li>Discuss principles of pre-hospital treatment for LTB and epiglottitis, with particular attention to airway management</li> </ul>
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						<p>in the case of epiglottitis.</p> <p><i>Dehydration</i></p> <ul style="list-style-type: none"> <li>▪ Name the common causes of dehydration in different paediatric age categories.</li> <li>▪ Grade dehydration by referring to various clinical features.</li> <li>▪ Discuss the pathophysiological effects of ECF fluid shifts.</li> <li>▪ Explain the goals of fluid replacement therapy for dehydration and describe the roles played by both oral and IV rehydration.</li> <li>▪ Give the constituents of the WHO oral rehydration solution and explain how and when this should be administered.</li> <li>▪ Discuss options for IV access in different paediatric age groups and compare the advantages and disadvantages of each choice.</li> <li>▪ Describe optimal choices for fluid type and administration volume/rate in the treatment of severe dehydration.</li> <li>▪ Define paediatric maintenance fluid administration in terms of types of fluid and volume/rates of infusion.</li> </ul> <p><i>Shock</i></p> <ul style="list-style-type: none"> <li>▪ Describe the clinical presentation of hypovolaemic shock in different paediatric age groups, emphasising the assessment of end-organ perfusion.</li> <li>▪ Describe optimal choices for fluid type and administration volume/rate in the treatment of hypovolaemic shock.</li> <li>▪ Explain how to effectively monitor the paediatric patient in hypovolaemic shock in order to ensure</li> </ul>
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						<p>adequacy of fluid therapy and avoid complications associated with over-hydration.</p> <ul style="list-style-type: none"> <li>▪ Define and describe other important types of shock in paediatric patients, their differential clinical features and give a broad outline of associated principles of pre-hospital treatment.</li> <li>▪ Discuss the role played by vasopressors [adrenaline] in the treatment of shock and explain principles of administration, side-effects, complications and contra-indications. [Refer to HPCSA ALS protocols]</li> </ul> <p><i>Congenital Cardiac Abnormalities</i></p> <ul style="list-style-type: none"> <li>▪ Describe the foetal circulation and discuss circulatory changes that occur at and immediately after birth.</li> <li>▪ Distinguish between cyanotic and acyanotic congenital cardiac abnormalities.</li> <li>▪ List the anatomical features, and give an overview of the major pathophysiological effects of: <ul style="list-style-type: none"> <li>○ Tetralogy of Fallot;</li> <li>○ Pulmonary atresia with &amp; without VSD;</li> <li>○ Transposition of the great arteries;</li> <li>○ Total anomalous pulmonary venous drainage;</li> <li>○ Hypoplastic left heart syndrome;</li> <li>○ Pulmonary stenosis;</li> <li>○ Aortic coarctation.</li> </ul> </li> </ul> <p><i>Diabetes Mellitus</i></p>
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						<ul style="list-style-type: none"> <li>▪ Discuss the incidence and epidemiology of diabetes mellitus occurring in childhood.</li> <li>▪ Describe the aetiology of diabetes mellitus in children, particularly with reference to traditional classification of the disease.</li> <li>▪ Describe factors which may lead to both DKA and hypoglycaemia in paediatric patients with DM.</li> <li>▪ Discuss principles of pre-hospital treatment for both DKA and hypoglycaemia. [Refer to HPCSA ALS protocols]</li> </ul> <p><i>Seizures</i></p> <ul style="list-style-type: none"> <li>▪ Name the aetiologies and types more commonly associated with paediatric seizures.</li> <li>▪ Define febrile seizures and discuss the underlying cause and possible neurological sequelae of this disorder.</li> <li>▪ Define status epilepticus, explain the possible pathological mechanism underlying this disorder and describe its systemic and neurological consequences.</li> <li>▪ Discuss principles of pre-hospital treatment of seizures, particularly generalised tonic-clonic seizures and convulsive status epilepticus, including the administration of benzodiazepines for the termination of seizures. [Refer to HPCSA ALS protocols]</li> </ul> <p><i>Intracranial Infections</i></p> <ul style="list-style-type: none"> <li>▪ Define meningitis and encephalitis.</li> <li>▪ Describe the most common causative organisms associated with bacterial meningitis in different paediatric age groups and how the disease is transmitted from person to person.</li> <li>▪ List the factors</li> </ul>
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						<p>predisposing paediatric patients to intracranial infections.</p> <ul style="list-style-type: none"> <li>Describe the pathophysiology of meningitis, including the effects of raised intracranial pressure caused by this condition.</li> <li>Name the clinical features of bacterial meningitis in different paediatric age groups.</li> <li>Discuss principles of pre-hospital treatment of intracranial infections in general, and bacterial meningitis in particular.</li> <li>Discuss specific precautions to be taken when dealing with cases of meningococcal septicaemia.</li> </ul> <p><i>Sepsis</i></p> <ul style="list-style-type: none"> <li>Define sepsis and briefly describe the incidence and aetiology of paediatric sepsis .</li> <li>List markers associated with the identification of sepsis in paediatric patients.</li> <li>Explain the major pathophysiological consequences of sepsis on respiratory and haemodynamic functioning.</li> <li>Discuss principles of pre-hospital supportive treatment of the septic paediatric patient.</li> </ul> <p><i>Toxicology</i></p> <ul style="list-style-type: none"> <li>Name the various forms of exposure to toxins and relate these to risk for poisoning in different paediatric age groups.</li> <li>Discuss the toxicology (MOA, effects, lethal dose, clinical features of exposure) of: <ul style="list-style-type: none"> <li>Paracetamol;</li> <li>Aspirin;</li> <li>Organophosphate pesticides;</li> </ul> </li> <li>Discuss principles of pre-hospital treatment, including any antidotes, for each of the agents listed above. [Refer to</li> </ul>
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							<p>HPCSA ALS protocols]</p> <p><i>Trauma &amp; Burns</i></p> <ul style="list-style-type: none"> <li>Describe injury patterns and mechanisms of injury specific to different paediatric age groups in relation to mobility, behavioural development and anatomical characteristics (including SCIWORA).</li> <li>Explain the haemodynamic compensatory response to blood loss in different paediatric age groups and how this relates to the clinical identification of hypovolaemia.</li> <li>Relate prior knowledge of fluid choice and administration in traumatic hypovolaemia to paediatric patients.</li> <li>List the most common causes of burns in different paediatric age groups.</li> <li>Use the paediatric 'rule of nines' to estimate burned surface area in paediatric patients.</li> <li>Define a critical burn as this relates to BSA, depth and burns to specific anatomical regions in different paediatric age groups.</li> <li>List clinical features associated with inhalation burns.</li> <li>Discuss the rationale for treatment of critical burns in a specialist burns unit and name the burns units in Gauteng.</li> <li>Discuss principles of pre-hospital treatment for burns in paediatric patients including care of the burn wound, specific airway management in a case of inhalation burns and IV fluid administration.</li> </ul> <p><i>Pain Management</i></p> <ul style="list-style-type: none"> <li>Discuss the challenges associated with identifying and quantifying pain, particularly in younger children.</li> </ul>
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							<p>and list some of the more common side-effects associated with these drugs.</p> <p><i>Approach to a Child with a Decreased Level of Consciousness</i></p> <ul style="list-style-type: none"> <li>▪ Give a suitable definition for the terms encephalopathy and coma, and differentiate between them.</li> <li>▪ Discuss the assessment of level of consciousness in children, and some of the pitfalls and limitations particularly in younger children.</li> <li>▪ Discuss common causes of decreased level of consciousness in children.</li> <li>▪ Explain general and specific management principles for decreased level of consciousness in children.</li> </ul> <p><i>Drowning and Near-drowning</i></p> <ul style="list-style-type: none"> <li>▪ Define the terms drowning, near-drowning and immersion and differentiate clearly between them.</li> <li>▪ Discuss common circumstantial causes of drowning and near drowning in children, and relate these to age categories.</li> <li>▪ Describe the pathophysiology of drowning and near drowning.</li> <li>▪ Explain the priorities in treatment or a paediatric drowning/near drowning victim (including safety) and outline the principles of management in the pre-hospital setting.</li> </ul>
Pharmacology 1	PHA01Y3	100%	0%	7	12	The Pharmacology module dealt with the principles of pharmacology and how generic groups of medications may interact with and affect human	Throughout completion of this module, the following learning outcomes were achieved: Define pharmacology. Discuss the development of a drug with regards to

					<p>physiology. This subject required the student to once again link their understanding of physiology, pathophysiology and emergency medical care to the prescription and administration of medications. Issues such as the legal requirements surrounding the procurement, use, and storage of medications were also covered. Each of the medications that were commonly prescribed and / or administered by emergency care practitioners were dealt with in significant detail.</p>	<p>patenting, in vitro testing, animal testing, different phases of clinical testing and drug marketing.</p> <p>Describe scope of modern pharmacology including small molecule based therapies, protein based therapies (biopharmaceuticals), stem cell based therapies, gene based therapies</p> <p>Discuss the role of the legislating bodies with regards to pharmacology.</p> <p>Describe different types of drug formulations and the importance of additives in drugs</p> <p>Outline nomenclature used to describe drugs e.g. generic name, trade name, orphan drug, offlabel use etc.</p> <p>Name the various routes of administration of drugs, giving the advantages and disadvantages of each.</p> <p>Describe absorption and factors that will influence it with reference to clinically utilised sites of administration</p> <p>Describe the factors influencing the distribution of drugs (e.g. protein binding, lipid solubility, pH, pKa) and their alteration in physiological and pathological disturbance</p> <p>Describe the mechanisms of non-hepatic and hepatic metabolism of drugs.</p> <p>Describe Phase 1 and Phase 2 reactions, hepatic extraction ratio and its significance, first pass effect, enzyme induction and inhibition</p> <p>Explain the mechanism and significance of selected pharmacogenetic disorders such as malignant hyperpyrexia, porphyria</p> <p>Describe the mechanisms of drug clearance and how physiological and pathological disturbance may effect these</p> <p>Discuss steady-state drug levels in the blood and the factors which influence steady-state concentration.</p>
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Physical Preparedness 1, 2, 3 and 4	PFP01Y1	100%	0%	5	0	Medical Rescue work is by nature physically taxing and places demands on the rescuer, both in terms of strength and endurance. In order for an Emergency Care Practitioners to perform effectively and safely in the emergency medical and rescue environments they need to possess set minimum levels of physical strength and endurance. Rescue workers who are unfit are unable to perform as they should and this has a negative effect on the rescue operation as well as patient care. For this reason, all students who have registered for the Bachelor Degree in Emergency Medical Care programme at University of Johannesburg, were required to register for the physical preparedness module in each year of study. Students were required to partake in the on and off-campus training sessions and demonstrate that they were in acceptable physical condition. Students who failed to pass the Physical Preparedness modules were not eligible to register for any of the rescue modules, as these modules remained a prerequisite for registration and participation in the medical rescue components and related events within the B EMC programme.	Emergency Care and Medical Rescue work is by nature physically taxing and places demands on the care giver / rescuer, both in terms of strength and endurance. In order for Emergency Care Providers to perform effectively and safely in emergency medical care and rescue environments they need to possess minimum levels of physical strength and endurance. On successful completion of the module, one is able to operate safely and effectively in a physically demanding scenario such as when performing tasks of a physical nature.
	PFP02Y2	100%	0%	5	0		
	PFP03Y3	100%	0%	5	0		
	PFP04Y4	100%	0%	5	0		
Physiology 1	PHY01Y1	100%	0%	5	12	Physiology provides foundational	Throughout completion of this module, the following

					<p>knowledge for pathology and clinically related subjects. The content included an introduction to anatomy and physiology, chemistry for anatomy and physiology, the cell, basic histology, the integumentary system, bone and joints, muscle, the nervous system and special senses, the endocrine system, blood and the cardiovascular system, and the respiratory, digestive, urinary and reproductive systems. This module aided in the development of a student competent in the clinical knowledge and skills required to provide specialised emergency medical care and rescue services to all sectors of the community.</p>	<p>learning outcomes were achieved:</p> <p>Describe the basic functions of living organisms.</p> <p>Define the terms Anatomy and Physiology.</p> <p>Describe the specialties of Physiology.</p> <p>Identify the major levels of organisation in living organisms.</p> <p>Identify the organ systems of the human body and list the functions of each system.</p> <p>Explain the concept of homeostasis and its significance for living organisms.</p> <p>Describe the two mechanisms involved in homeostatic regulation.</p> <p>Describe the three parts of a homeostatic regulatory mechanism.</p> <p>Describe how positive and negative feedback mechanisms are involved in homeostatic regulation.</p> <p>Differentiate between atoms, elements, isotopes, molecules, compounds and mixtures.</p> <p>Compare the different ways in which atoms combine to form molecules and compounds.</p> <p>Distinguish between the major types of chemical reactions in the body.</p> <p>Describe the crucial role of enzymes in metabolism</p> <p>Distinguish between organic and inorganic compounds.</p> <p>Discuss the unique chemical properties of water.</p> <p>Discuss the importance of pH and the role of buffers in body fluids.</p> <p>Describe the basic structure and functions of carbohydrates, lipids, proteins, nucleic acids and high-energy compounds.</p> <p>List the functions of the cell membrane.</p> <p>Describe the structure of the cell membrane by listing each of its components and their functions.</p>
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Physiology 2	PHY02Y2	100%	0%	6	12	<p>Physiology provided fundamental knowledge for pathology and clinically related subjects. The content covered in this module included an elaboration on the basic knowledge obtained in the student's first year and focused on the lymphatic system and immunity; metabolism and energetics; endocrinology; the nervous system and senses; development and inheritance; fluid and pH balance; the respiratory system; blood and the cardiovascular system; muscle and exercise; and thermoregulation</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <p><b>THE LYMPHATIC SYSTEM AND IMMUNITY</b></p> <ul style="list-style-type: none"> <li>▪ Distinguish between nonspecific and specific defenses.</li> <li>▪ Compare the role of nonspecific and specific defences in immunity.</li> <li>▪ Identify the major components of the lymphoid system.</li> <li>▪ Describe the structure and function of the lymphatic vessels.</li> <li>▪ Explain the processes involved in lymph formation.</li> <li>▪ Explain the force behind lymph circulation.</li> </ul> <p><b>METABOLISM AND ENERGY</b></p> <ul style="list-style-type: none"> <li>▪ Define metabolism.</li> <li>▪ Distinguish between anabolic and catabolic reactions.</li> <li>▪ Explain why cells must synthesise new organic components.</li> <li>▪ Describe the basic steps in the pathways involved in carbohydrate metabolism.</li> <li>▪ Describe the basic steps in: <ul style="list-style-type: none"> <li>○ Glycolysis;</li> <li>○ The citric acid cycle;</li> <li>○ The electron transport system</li> </ul> </li> <li>▪ Summarise the energy yield of glycolysis and cellular respiration</li> <li>▪ Compare glycolysis and gluconeogenesis</li> </ul> <p><b>ENDOCRINE SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ Elaborate on the functions of hormones that regulate carbohydrate,</li> </ul>
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							<p>protein and lipid metabolism</p> <ul style="list-style-type: none"> <li>▪ Name all the hormones that play a role in regulating carbohydrate, protein and lipid metabolism.</li> <li>▪ Explain how each of these hormones influence metabolism.</li> <li>▪ Discuss the effect of hyper and hypo secretion of these hormones on metabolism.</li> <li>▪ Elaborate on the functions of hormones that regulate electrolyte levels in the body.</li> <li>▪ Name all the hormones that play a role in regulating electrolyte balance in the body.</li> <li>▪ Explain how each of these hormones influence the electrolyte balance.</li> <li>▪ Discuss the effect of hyper- and hypo-secretion of these hormones in the body.</li> <li>▪ Fully explain the hormonal regulation of blood pressure.</li> <li>▪ Explain the difference between the hormonal control of short and long term stress management</li> <li>▪ Distinguish between the hormones responsible for short and long</li> </ul>
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							<p>term stress management.</p> <ul style="list-style-type: none"> <li>▪ Explain the significance of short term stress management.</li> <li>▪ Relate the events of long term stress management to the specific needs of body during long term stress.</li> </ul> <p><b>NERVOUS SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ Describe the effect of chemical factors on neural activity.</li> <li>▪ Describe the effects of neurotoxins and local anaesthetics on the nervous system.</li> <li>▪ Describe how changes in the extracellular potassium concentration can alter the electrical activity of neurons.</li> <li>▪ Describe the effect of neurotransmitters on postsynaptic cells.</li> <li>▪ Define the major groups of neurotransmitters.</li> <li>▪ Describe the effect of neurotransmitters on the post-synaptic cell.</li> <li>▪ Discuss synaptic plasticity.</li> <li>▪ Briefly discuss diseases associated with deficiencies in synaptic transmission.</li> <li>▪ Briefly discuss the response of neurons to injuries.</li> <li>▪ Contrast and compare axonal re-growth in the</li> </ul>
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						<p>central and peripheral nervous systems.</p> <p><b>THE SPINAL CORD</b></p> <ul style="list-style-type: none"> <li>Describe, in detail, the sensory and motor pathways.</li> <li>Trace the neuronal pathway of each of the main somatic sensory pathways and describe the stimuli that are carried by each.</li> <li>Describe how the central nervous system distinguishes the nature of the arriving stimulus.</li> <li>Describe the origin, pathway, destination and actions of all the descending tracts.</li> </ul> <p><b>THE BRAIN</b></p> <ul style="list-style-type: none"> <li>Identify the components and discuss the functions of the cerebrum, cerebellum, limbic system, and brainstem.</li> <li>Locate the primary, secondary and association areas of the cerebral cortex and discuss their functions in detail.</li> <li>Explain the concept of hemispheric lateralization.</li> <li>Describe the functions of the cerebellum and limbic system.</li> <li>List the components of the brainstem and describe the functions of each.</li> </ul>
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							<p><b>INTEGRATIVE FUNCTIONS OF THE NERVOUS SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ Discuss and differentiate between different states of arousal.</li> <li>▪ Describe the principle waves in an EEG and name the behavioural state associated with each wave.</li> <li>▪ Describe the functional significance of the EEG.</li> <li>▪ Explain the role of the brainstem reticular formation in arousal.</li> <li>▪ Distinguish between and compare the different levels of sleep.</li> <li>▪ Describe the classification and physiological basis of both learning and memory.</li> <li>▪ Distinguish between associative &amp; non-associative learning and between habituation and sensitization.</li> <li>▪ List the different classes of memories and describe memory processing.</li> <li>▪ Explain the cellular changes that occur during memory consolidation.</li> <li>▪ Discuss the different types of amnesia.</li> <li>▪ Describe the physiology of emotions and behavioural drives.</li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Describe the pathways involved in emotional processing.</li> <li>▪ Discuss the importance of motivation.</li> <li>▪ Discuss the physiology of language.</li> <li>▪ Explain the respective roles of Wernicke's area, Broca's area and the motor cortex in language.</li> <li>▪ Describe the cerebral processing involved in vocalizing a written or spoken word.</li> <li>▪ Differentiate between the different aphasias.</li> <li>▪ Describe the effect of different factors on brain chemistry and behaviour.</li> <li>▪ Describe chemically-related alterations in brain function.</li> <li>▪ Describe the age-related anatomical and functional changes to the nervous system.</li> </ul> <p>PAIN</p> <ul style="list-style-type: none"> <li>▪ Discuss the physiological mechanisms underlying pain.</li> <li>▪ State the functional purpose of pain.</li> <li>▪ Distinguish between the two major categories of pain.</li> <li>▪ Describe the functioning of pain receptors and list the types of painful stimuli.</li> <li>▪ Trace the dual transmission of pain into the central nervous system.</li> </ul>
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						<ul style="list-style-type: none"> <li>▪ Discuss analgesia and describe the major components of the analgesic system.</li> <li>▪ Describe the role of endorphins and enkephalins in the analgesic system.</li> <li>▪ Describe the gate control theory of pain modulation.</li> <li>▪ Describe the physiological mechanisms underlying referred and visceral pain.</li> <li>▪ Contrast the characteristics of visceral and parietal pathways for transmission of visceral pain.</li> <li>▪ Identify the types, causes and characteristics of intracranial and extracranial headaches.</li> </ul> <p><b>MOTOR CONTROL OF THE BRAIN</b></p> <ul style="list-style-type: none"> <li>▪ Discuss the motor control of the cerebral cortex and brainstem.</li> <li>▪ Identify the location and functional significance of the cortical motor areas.</li> <li>▪ Contrast and compare the corticospinal and medial and lateral pathways of motor control.</li> <li>▪ Discuss the functions of the reticular and vestibular nuclei in motor control.</li> <li>▪ Describe the vestibular system and explain how this system functions to maintain equilibrium.</li> <li>▪ Discuss the motor control of the</li> </ul>
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						<p>cerebellum and basal ganglia.</p> <ul style="list-style-type: none"> <li>▪ Discuss the major subdivisions and functions of the cerebellum.</li> <li>▪ Describe the afferent inputs to the cerebellum.</li> <li>▪ Discuss the major cerebellar pathways.</li> <li>▪ Identify the major clinical symptoms associated with cerebellar abnormalities.</li> <li>▪ Describe the putamen and caudate circuits of the basal nuclei.</li> <li>▪ Describe the integration that occurs in the motor control system.</li> </ul> <p><b>AUTONOMIC NERVOUS SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ Discuss the structure and functions of the autonomic nervous system.</li> <li>▪ Compare the structural organization of the sympathetic and parasympathetic nervous systems.</li> <li>▪ List the physiological effects of both sympathetic and parasympathetic stimulation.</li> <li>▪ Describe the mechanisms of neurotransmitter release and removal in the autonomic nervous system.</li> <li>▪ Describe the locations and intracellular effects of both adrenergic and cholinergic receptors.</li> <li>▪ Describe the importance of autonomic tone</li> </ul>
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						<p>and dual innervation.</p> <p><b>SPECIAL SENSES</b></p> <ul style="list-style-type: none"> <li>▪ Describe the physiological processing involved in vision and hearing.</li> <li>▪ Explain the following: <ul style="list-style-type: none"> <li>○ photoreception,</li> <li>○ recovery from stimulation,</li> <li>○ night blindness,</li> <li>○ colour vision</li> <li>○ colour blindness</li> <li>○ light and dark adaptation.</li> </ul> </li> <li>▪ Describe the visual pathway and the functions of the various cells found along this pathway.</li> <li>▪ Describe how pitch and loudness are coded for respectively.</li> </ul> <p><b>DEVELOPMENT AND INHERITANCE</b></p> <ul style="list-style-type: none"> <li>▪ Explain the relationship between differentiation and development.</li> <li>▪ Briefly describe the various stages of development: <ul style="list-style-type: none"> <li>○ Fertilisation (conception);</li> <li>○ Prenatal development;</li> <li>○ Embryological development;</li> <li>○ Foetal development;</li> <li>○ Postnatal development; and</li> <li>○ Maturity</li> </ul> </li> <li>▪ Describe the process of fertilisation.</li> <li>▪ Distinguish between the roles of the sperm and</li> </ul>
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						<p>oocyte during fertilisation.</p> <ul style="list-style-type: none"> <li>▪ Explain, in detail, oocyte activation.</li> <li>▪ Describe fertilisation and the preparation for cleavage.</li> <li>▪ Discuss prenatal development.</li> <li>▪ List the three stages of prenatal development.</li> <li>▪ Describe the events of each of the three stages of prenatal development.</li> <li>▪ Explain the formation of extra-embryonic membranes.</li> <li>▪ Describe the four general processes that occur during the first trimester: <ul style="list-style-type: none"> <li>○ Cleavage;</li> <li>○ Implantation;</li> <li>○ Placentation; and</li> <li>○ Embryogenesis</li> </ul> </li> <li>▪ Explain how the three germ layers participate in the formation of extra-embryonic membranes.</li> <li>▪ Describe the role of the placenta as an endocrine organ.</li> <li>▪ Describe the interplay between the mother and the developing foetus.</li> <li>▪ Describe the interplay between the maternal organ systems and the developing foetus.</li> <li>▪ Discuss the structural and functional changes in the uterus during gestation.</li> <li>▪ Discuss the events of labour and delivery.</li> <li>▪ Explain the hormonal changes that play a role during the onset of labour.</li> </ul>
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						<ul style="list-style-type: none"> <li>▪ Describe the role of mechanical changes in the initiation of labour.</li> <li>▪ Briefly describe the stages of labour.</li> <li>▪ Identify the features and physiological changes of the postnatal stages of life.</li> <li>▪ Briefly discuss the following stages: <ul style="list-style-type: none"> <li>○ The neonatal period;</li> <li>○ Infancy and childhood;</li> <li>○ Adolescence and maturity; and</li> <li>○ Senescence</li> </ul> </li> <li>▪ Describe gender/sex determination and relate the basic principles of genetics to the inheritance of human traits.</li> <li>▪ Explain the role of the Y chromosome in ensuring that the bipotential embryo develops into a male.</li> <li>▪ Explain inheritance using punnet squares and pedigrees.</li> <li>▪ Explain sources of individual variation and sex-linked inheritance.</li> </ul> <p><b>FLUID, ELECTROLYTE AND ACID-BASE BALANCE</b></p> <ul style="list-style-type: none"> <li>▪ Explain what is meant by the terms fluid, electrolyte, and acid-base balance.</li> <li>▪ Explain what is meant by the terms fluid balance; electrolyte balance and acid-base balance.</li> <li>▪ Compare the composition of</li> </ul>
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							<p>intracellular (ICF) and extracellular fluid (ECF).</p> <ul style="list-style-type: none"> <li>▪ Distinguish between ICF and ECF fluid compartments.</li> <li>▪ Explain the basic concepts involved in the regulation of fluids and electrolytes.</li> <li>▪ Identify the hormones that play a role in fluid and electrolyte regulation.</li> <li>▪ Describe the movement of fluid between different compartments in the body.</li> <li>▪ Describe the movement of fluid: <ul style="list-style-type: none"> <li>○ within the ECF;</li> <li>○ between ECF and ICF; and</li> <li>○ between ECF and the environment</li> </ul> </li> <li>▪ Discuss the mechanisms by which electrolyte concentrations are regulated.</li> <li>▪ Discuss the mechanisms by which: <ul style="list-style-type: none"> <li>○ sodium;</li> <li>○ potassium;</li> <li>○ calcium; and</li> <li>○ chloride ion concentrations are regulated to maintain electrolyte balance.</li> </ul> </li> <li>▪ Understand various forms of dehydration.</li> <li>▪ Explain the buffering systems that balance the pH of the intra- and extracellular fluids.</li> <li>▪ Explain the importance of pH control.</li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Distinguish between different types of acids in the body.</li> <li>▪ Distinguish between the functioning and roles of the three major buffer systems in the body: protein buffer system; carbonic acid-bicarbonate buffer system; and phosphate buffer system.</li> <li>▪ Describe the respiratory and renal compensatory mechanisms involved in the maintenance of acid-base balance.</li> <li>▪ Identify the most frequent disturbances of acid-base balance.</li> <li>▪ Explain how the body responds when the pH of body fluids varies outside normal limits: <ul style="list-style-type: none"> <li>○ respiratory acidosis</li> <li>○ respiratory alkalosis</li> <li>○ metabolic acidosis</li> <li>○ metabolic alkalosis</li> <li>○ Be able to diagnose an acid-base disorder when given values.</li> </ul> </li> <li>▪ Describe the effects of aging on fluid, electrolyte and acid-base balance.</li> <li>▪ Describe changes in total body water; renal capacity; mineral turnover and compensatory mechanisms that accompany aging.</li> </ul>
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							<p><b>RESPIRATORY SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ List the various indicators of respiratory performance and discuss their relevance.</li> <li>▪ Define, calculate and interpret the following indicators of respiratory performance: <ul style="list-style-type: none"> <li>○ respiratory rate</li> <li>○ lung volumes e.g. tidal volume, expiratory reserve volume, residual volume, inspiratory reserve volume</li> <li>○ lung capacities e.g. inspiratory capacity, functional capacity, vital capacity and total lung capacity</li> <li>○ dead space volume</li> <li>○ minute ventilation</li> <li>○ alveolar ventilation</li> <li>○ FEV1/FVC ratio</li> <li>○ peak expiratory flow rate</li> </ul> </li> <li>▪ Describe the transport of respiratory gases by the blood.</li> <li>▪ Describe the manner in which oxygen is transported by the blood.</li> <li>▪ Draw a normal oxygen-haemoglobin (O<sub>2</sub>-Hb) saturation curve and explain its relevance.</li> <li>▪ Describe how and why variations of the following factors alter the position of</li> </ul>
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							<p>the O<sub>2</sub>-Hb saturation curve:</p> <ul style="list-style-type: none"> <li>○ pH;</li> <li>○ temperature;</li> <li>○ 2,3 biphosphoglycerate levels; and</li> <li>○ exercise</li> <li>▪ Compare the O<sub>2</sub>-Hb saturation curve of an adult to that of a foetus.</li> <li>▪ Describe the manner in which carbon dioxide is transported by the blood. Include an explanation of the terms, chloride shift and Haldane effect in your description.</li> <li>▪ Describe the manner in which carbon monoxide is transported in the blood and the effect that it has on blood oxygen transport.</li> <li>▪ Discuss the control of respiration.</li> <li>▪ Describe the nervous and local control of bronchiolar musculature.</li> <li>▪ Name the four respiratory centres, describe their locations and discuss the effect that each one has on the ventilation rate and pattern.</li> <li>▪ Define the following terms: <ul style="list-style-type: none"> <li>○ Hypercapnia/hypocapnia;</li> <li>○ Hypoxia; and</li> <li>○ Hyperventilation/hypoventilation</li> </ul> </li> <li>○ Describe how the following factors modify ventilation:</li> <li>○ Chemoreceptor reflex;</li> </ul>
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						<ul style="list-style-type: none"> <li>○ Baroreceptor reflex;</li> <li>○ Hering-Breuer reflex;</li> <li>○ Protective reflexes;</li> <li>○ Voluntary control; and</li> <li>○ Exercise</li> </ul> <p>INTEGRATED PHYSIOLOGY</p> <ul style="list-style-type: none"> <li>▪ Discuss the effect of environmental changes such as high altitude and deep sea diving on respiratory function.</li> <li>▪ Describe the effect of (a) high altitude OR (b) deep sea diving on the body by answering the questions below as it pertains to each environmental condition: <ul style="list-style-type: none"> <li>○ Describe the changes in ambient pressure that the body is exposed to in each environmental condition.</li> <li>○ Explain how the specific environmental condition affects the ambient, alveolar, and blood carbon dioxide and oxygen levels.</li> <li>○ Describe the effects that these blood gas levels have on the respiratory function.</li> <li>○ Identify other physiological effects that each environmental condition may have on the body.</li> </ul> </li> </ul>
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							<p><b>BLOOD</b></p> <ul style="list-style-type: none"> <li>▪ Discuss the life cycle of erythrocytes and the pathophysiology of red blood cells.</li> <li>▪ Describe the recycling of aged or damaged red blood cells.</li> <li>▪ Define polycythaemia, and discuss the effect that it has on the body.</li> <li>▪ Define anaemia, and describe the effect that it has on the body.</li> <li>▪ List the different types of anaemia and the cause of each one.</li> <li>▪ Discuss the pathophysiology of white blood cells/leukocytes.</li> <li>▪ Define the terms leukopenia and leukocytosis and discuss the effect of each condition on the body.</li> <li>▪ Discuss the pathophysiology of blood platelets/thrombocytes.</li> <li>▪ Define the terms thrombocytopenia and thrombocytosis and list possible causes of each condition.</li> <li>▪ Discuss cross reactions during blood typing and erythroblastosis fetalis</li> <li>▪ Describe the effect that blood group</li> </ul>
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							<p>incompatibilities have on the body.</p> <ul style="list-style-type: none"> <li>▪ Discuss the condition, erythroblastosis fetalis, by describing how it develops, the effects that this condition has on the foetus and new-born, and possible therapeutic interventions.</li> <li>▪ Describe the process of haemostasis and its associated pathologies.</li> <li>▪ Understand the intrinsic and extrinsic pathways and their associated factors.</li> <li>▪ List the factors that exercise negative and positive feedback control over coagulation and describe how they prevent coagulation in normal, intact blood vessels.</li> <li>▪ Describe the cause, specific effects on haemostasis and therapeutic interventions for each of the following conditions: <ul style="list-style-type: none"> <li>○ Vitamin K deficiency</li> <li>○ Thrombocytopenia</li> <li>○ Haemophilia</li> <li>○ Von Willebrands Disease</li> </ul> </li> </ul>
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						<p><b>CARDIOVASCULAR SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ Describe the cardio-dynamics and discuss how they are regulated.</li> <li>▪ Define the terms: cardiac output, stroke volume and heart rate, and indicate how these factors are related.</li> <li>▪ Explain how the end-diastolic and end-systolic volumes affect the stroke volume, and discuss how each is regulated.</li> <li>▪ Describe the Frank-Starling mechanism in the heart.</li> <li>▪ Discuss how the heart rate is regulated by autonomic innervation and hormones.</li> <li>▪ Discuss the various mechanisms that regulate the activity of the cardiovascular system</li> <li>▪ List the three mechanisms by which the cardiovascular function is regulated.</li> <li>▪ Explain how autoregulation maintains blood flow within specific tissues.</li> <li>▪ Indicate the location of the cardiovascular control centre and describe its various subdivisions and</li> </ul>
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							<p>their respective functions.</p> <ul style="list-style-type: none"> <li>▪ Explain how vasomotor tone is maintained.</li> <li>▪ Explain the baroreceptor reflex and describe how it affects cardiovascular function.</li> <li>▪ Explain the chemoreceptor reflex and describe how it affects cardiovascular function.</li> <li>▪ List the hormones that regulate cardiovascular function and describe the specific effects of each one.</li> <li>▪ Describe the role of the cardiovascular system in hypertension</li> <li>▪ Relate each factor that alters blood pressure during hypertension to the changes that occur in the cardiovascular system.</li> <li>▪ Briefly describe the common therapeutic interventions available for this disease and their mechanisms of action.</li> <li>▪ Discuss the body's response to haemorrhaging</li> <li>▪ Define circulatory shock and list the causes thereof.</li> <li>▪ Describe the three phases of</li> </ul>
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							<p>haemorrhagic shock and the physiological mechanisms that characterize each phase.</p> <ul style="list-style-type: none"> <li>▪ Account for the main signs and symptoms of haemorrhagic shock.</li> </ul> <p><b>MUSCULAR SYSTEM</b></p> <ul style="list-style-type: none"> <li>▪ Describe the mechanics of muscle contraction and relaxation.</li> <li>▪ Discuss and compare the following: muscle twitch, treppe, wave summation, tetanus (incomplete &amp; complete), isotonic and isometric contractions and muscle relaxation.</li> <li>▪ Discuss the energetics of muscular activity.</li> <li>▪ Describe the mechanisms by which muscle fibres obtain energy.</li> <li>▪ Distinguish between energy production in a resting muscle, a moderately active muscle and a muscle at peak levels of activity.</li> <li>▪ Explain muscle fatigue and recovery from fatigue.</li> <li>▪ Describe the role of different hormones on muscle activity.</li> <li>▪ Discuss muscular performance.</li> <li>▪ Relate the types of muscle fibres to</li> </ul>
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						<p>muscular performance.</p> <ul style="list-style-type: none"> <li>▪ Distinguish between aerobic and anaerobic endurance and explain their implications for muscular performance.</li> <li>▪ Describe the effects of exercise and ageing on the muscular system.</li> <li>▪ Describe specific clinical terms associated with the muscular system.</li> <li>▪ Understand polio, botulism, tetanus, myasthenia gravis and Duchenne's muscular dystrophy.</li> </ul> <p><b>EXERCISE</b></p> <ul style="list-style-type: none"> <li>▪ Describe the differences between male and female athletes.</li> <li>▪ Describe the gender differences that affect athletic performance.</li> <li>▪ Describe the ventilatory responses to exercise.</li> <li>▪ Explain how oxygen consumption changes during and after exercise.</li> <li>▪ Define VO<sub>2</sub>max and explain its relevance to an athlete.</li> <li>▪ Describe how respiration changes before, during and after exercise.</li> <li>▪ Describe the cardiovascular</li> </ul>
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						<p>response to exercise.</p> <ul style="list-style-type: none"> <li>▪ Explain how blood pressure is affected by exercise.</li> <li>▪ Describe how and why blood is redistributed throughout the body during exercise.</li> <li>▪ Explain the long term effects of exercise on the cardiovascular system.</li> <li>▪ Describe the importance of exercise and its contribution to health.</li> <li>▪ Describe the various benefits of exercise on health.</li> </ul> <p><b>THERMOREGULATION</b></p> <ul style="list-style-type: none"> <li>▪ Describe thermoregulation and the mechanisms of heat transfer.</li> <li>▪ Explain the importance of maintaining a relatively constant body temperature.</li> <li>▪ Discuss what is meant by "normal" body temperature and the factors that are responsible for individual variations.</li> <li>▪ Describe the mechanisms whereby heat is gained or lost from the body (i.e. conduction, convection, radiation and evaporation), and the primary sites of the body where these occur.</li> <li>▪ Describe the thermoregulatory reflexes of the body.</li> </ul>
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							<ul style="list-style-type: none"> <li>▪ Identify the components of a thermoregulatory reflex.</li> <li>▪ Identify the names and locations of the body's thermoreceptors and the stimuli to which each responds.</li> <li>▪ Describe the role of the hypothalamus in temperature regulation.</li> <li>▪ Describe the effectors of heat gain and loss.</li> <li>▪ Discuss abnormalities of thermoregulation.</li> <li>▪ Define the terms, hyperthermia and hypothermia.</li> <li>▪ Explain the cause and effect of each of the following on normal body temperature: <ul style="list-style-type: none"> <li>○ Fever</li> <li>○ Heat exhaustion</li> <li>○ Heat stroke</li> <li>○ Hot flashes</li> <li>○ Malignant hyperthermia</li> <li>○ Hypothermia</li> </ul> </li> </ul>
Primary Health Care 2	PHC01B2	100%	0%	6	6	<p>The purpose of Primary Health Care (PHC) was to introduce the future Emergency Care Practitioner (ECP) to the concept of holistic PHC as enshrined within the National Department of Health (NDoH) framework. Primary Health Care is concerned with the health of individuals as well as the greater community amongst which these practitioners may reside. Primary Health Care</p>	<p>Throughout completion of this module, the following learning outcomes were achieved</p> <p>Primary healthcare for all:</p> <p>Discuss the historical background and foundation of Primary Health Care</p> <p>Discuss the Alma-Ata Declaration.</p> <p>Define the term Primary Health Care using the comprehensive approach.</p> <p>Briefly discuss the principles of Primary Health Care</p>

					<p>addressed all aspects of health within the community. These aspects included healthcare education, health promotion, access to healthcare as well as related issues such as community welfare, psychological wellbeing as well as the prevention of disease.</p>	<p>Define the term Comprehensive Health Care</p> <p>Understanding Health and illness:</p> <p>Differentiate between Health and Well-Being</p> <p>Define the role of the World Health Organization (WHO) in Primary Health Care</p> <p>Differentiate between Illness and Disease</p> <p>Define the Dimensions of Health</p> <p>Discuss the various Models of Health</p> <p>Discuss the various Models of Health</p> <p>Provide examples of different health challenges during the lifecycle</p> <p>Prevention of ill-health:</p> <p>Describe the Four Stages of Disease</p> <p>Discuss the approaches to Disease Prevention</p> <p>Discuss how an individual/organisation could screen for the Human Immunodeficiency Virus (HIV)</p> <p>Discuss the Ottawa Charter with regards to disease prevention</p> <p>Provide examples of recent trends in health promotion</p> <p>Communicable and non-communicable diseases:</p> <p>Provide a description of the term "communicable disease"</p> <p>Provide a description of the term "non-communicable disease"</p> <p>Describe what changes in communicable and non-communicable diseases</p>
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						<p>have occurred in Southern Africa.</p> <p>Discuss the relationship between communicable disease and immunity</p> <p>Discuss common occurring communicable diseases in Southern Africa</p> <p>Discuss common occurring non-communicable diseases in Southern Africa</p> <p>Planning and health information systems:</p> <p>Provide a reason as to the importance of planning in healthcare.</p> <p>Describe the planning cycle</p> <p>Define the term "Health Information System"</p> <p>Define the different levels within the Health Information System</p> <p>Describe the different stages in the information cycle</p> <p>Elaborate on the term "indicators"</p> <p>Health, human rights and ethics:</p> <p>Provide a brief background on bioethics</p> <p>Give a brief description on various types of ethical theories</p> <p>Define the term "human right".</p> <p>Explain how healthcare plays an important role in rights</p> <p>Give a brief description of health rights in South Africa</p> <p>Briefly comment on specific human rights and ethical dilemmas in Primary Health Care</p>
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							<p>Provide comment on dilemmas in health promotion</p> <p>The future of primary health care</p> <p>Explain the role of power and politics in society</p> <p>Define the concept of "Selective Primary Health Care"</p> <p>Discuss the importance of everybody striving for the ideals of Primary Health Care</p> <p>Describe current responses to the challenges of "Health for All"</p>
Research Elective 4	REP01Y4	100%	0%	8	30	<p>The purpose of this subject was to apply the basic skills and insights of Research Methodology in completing a research project under the guidance of a supervisor. The application of previous learning, the learning of new skills through conducting their own research and the ability to work independently constitute the broad learning outcomes for this subject.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <p>Apply the basic skills and insights of the Research Methodology module in completing a research project.</p> <p>Demonstrate the application of previous learning, as well as the learning of new skills through conducting your own research.</p> <p>Demonstrate the ability to work independently in conducting research.</p>
Research Methodology EMC	RMT01Y3	100%	0%	7	12	<p>The purpose of this subject was to provide the student with opportunities and a learning structure that played a facilitatory role in the achievement of two broad outcomes:</p> <ul style="list-style-type: none"> <li>To discuss, explain, critically analyse and apply the most important concepts underpinning the research process and</li> </ul>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>Define the term "research".</li> <li>Discuss the "three worlds" framework and explain how this characterises the nature of research.</li> <li>Refer to and explain eight characteristics of research in support of your definition.</li> <li>Give some examples of what</li> </ul>

						<p>the steps of this process;</p> <ul style="list-style-type: none"> <li>• To demonstrate limited application of various basic skills that will be necessary in conducting a research project of limited scope.</li> </ul>	<p>research is not and, in each case, explain why not.</p> <ul style="list-style-type: none"> <li>• Critically discuss the validity of publication (or dissemination) of results as a ninth essential characteristic of research.</li> <li>• Explain what is meant by the term "peer-review" and why it plays such a crucial role in defining activities classed as "research".</li> <li>• Define the term "worldview" as used within the context of this learning unit.</li> <li>• Describe the characteristics of the post-positivist worldview and explain the relationship between this worldview and the quantitative research paradigm.</li> <li>• Define inductive and deductive reasoning and contrast these two types of logical reasoning by referring to examples of each.</li> <li>• Relate inductive and deductive reasoning to quantitative research and describe how the nature of quantitative research can utilise either type of reasoning.</li> <li>• Describe what the scientific method is and what it encompasses.</li> <li>• Briefly explain the historical background to the evolution of the scientific method as we know it today, as a way of describing</li> </ul>
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						<p>why this body of techniques has become so important.</p> <ul style="list-style-type: none"> <li>• Name each element of the scientific method and explain what it is, how it is implemented and why it is crucial to this body of techniques.</li> <li>• Define quantitative research by referring to the central features of post-positivism and the scientific method.</li> <li>• Critically discuss limitations of the post-positivist worldview and the scientific method as defined above and explain how these limitations gave rise to what is currently known as qualitative research.</li> <li>• Describe the characteristics of the social constructivist worldview and explain the relationship between this worldview and the qualitative research paradigm.</li> <li>• Define qualitative research by referring to the central features of social constructivism.</li> <li>• Briefly discuss mixed-methods research and explain how and when this type of research would be relevant.</li> <li>• Define and contrast the terms “research design” and “research method” and give examples of each.</li> </ul>
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							<ul style="list-style-type: none"> <li>Describe the essential characteristics of the following research designs: <ul style="list-style-type: none"> <li>Quantitative Designs – Observational: <ul style="list-style-type: none"> <li>Case-series studies</li> <li>Case-control studies</li> <li>Cross-sectional studies</li> <li>Cohort studies</li> </ul> </li> <li>Quantitative Designs – Experimental: <ul style="list-style-type: none"> <li>Controlled clinical trials (concurrent controls, different types of non-concurrent controls, blinded trials, randomised &amp; non-randomised trials)</li> </ul> </li> <li>Quantitative Designs – Other: <ul style="list-style-type: none"> <li>Surveys</li> </ul> </li> <li>Qualitative Designs: <ul style="list-style-type: none"> <li>Ethnographic studies</li> <li>Grounded theory</li> <li>Case studies</li> <li>Phenomenological studies</li> </ul> </li> </ul> </li> <li>Give an example of one or more simple research problems where each of the above designs could be suitably used.</li> <li>Define the term “index” as this applies to published literature.</li> <li>Give the names and sources of electronic indices applicable to</li> </ul>
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						<p>medical research and how these can be accessed.</p> <ul style="list-style-type: none"> <li>• Give a brief overview of the extent and type of literature indexed in Index Medicus, Medline and CINAHL.</li> <li>• Define the term “keyword” as this applies to published literature and briefly discuss the origin and purpose of keywords that are part of a publication.</li> <li>• Discuss various options for searching each index named above (i.e. searching on title, author, keyword etc).</li> <li>• Define the term “medical subject heading” [MeSH] as this applies to the Medline index and explain the purpose and importance of MeSH terms.</li> <li>• Define the Boolean operators and demonstrate correct usage of the AND, OR and NOT operators as part of a search strategy.</li> <li>• Describe various options that can be used in order to refine a search that has returned too many titles or titles that do not appear to be applicable.</li> <li>• Describe the difference between an abstract and the full text of a published article and explain why it is not acceptable to only use the abstract of an article as a reference.</li> <li>• Discuss the options available for accessing the full</li> </ul>
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							<p>text of a published article, including a brief explanation of how the interlibrary loan system works.</p> <ul style="list-style-type: none"> <li>• Discuss the relevance and role played by general purpose internet search engines.</li> <li>• Explain the pitfalls of reliance on the internet as a sole source of scientific information.</li> <li>• Describe the characteristics of reputable information sources to be found on the internet.</li> <li>• Discuss the purpose of the literature review in a research proposal.</li> <li>• Describe the steps to follow in performing a literature review.</li> <li>• Define plagiarism, and the different types of plagiarism, and critically discuss why plagiarism is wrong.</li> <li>• Explain the purpose of referencing and how references should be used in a literature review.</li> <li>• Critically evaluate the use of bibliographic software for referencing by referring to advantages and disadvantages of this kind of software.</li> <li>• Describe the characteristics of an appropriate research title.</li> <li>• Differentiate between the research aim and objectives.</li> <li>• Demonstrate how to structure the wording of a research aim and</li> </ul>
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							<p>research objectives.</p> <ul style="list-style-type: none"> <li>• Explain the purpose of the research question and problem statement and how these can be used in clarifying the aim and objectives.</li> <li>• Discuss the main features and requirements for writing an appropriate research method.</li> <li>• Define and differentiate reliability and validity with regard to quantitative research.</li> <li>• Discuss common measures that may be taken to ensure or enhance validity and reliability.</li> <li>• Discuss trustworthiness in qualitative research by explaining its component parts; credibility, transferability, dependability and confirmability.</li> <li>• Discuss common measures that may be taken to ensure or enhance trustworthiness.</li> <li>• Critically discuss the importance of alignment of the research title, aim, objectives and method.</li> <li>• Describe the two data types – qualitative and quantitative – and discuss other data types falling into these two broad categories (categorical, ordinal, binary, scale and ratio).</li> <li>• Give examples of typical research applications where each of the above</li> </ul>
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							<p>data types could be used.</p> <ul style="list-style-type: none"> <li>• Discuss the aims of descriptive data analysis, both as a final outcome and as a preliminary step in more complex statistical analysis.</li> <li>• Describe the most basic ways of arranging categorical and ordinal data – frequency analysis and contingency tables.</li> <li>• Discuss the most effective ways of displaying frequency or count information graphically.</li> <li>• Define a histogram and explain how histograms may be used as a way of summarising quantitative variables.</li> <li>• State the two most important descriptive measures for scale and ratio data types – central tendency and variation.</li> <li>• Define the mean, the median and the mode, explain their value as measures of central tendency and state the advantages and disadvantages of each.</li> <li>• Define the range, variance and standard deviation and explain their value as measures of dispersion.</li> <li>• Define the quantiles, specifically the 25th, 50th and 75th percentiles and the interquartile range and explain their value as measures of both central</li> </ul>
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						<p>tendency and variation.</p> <ul style="list-style-type: none"> <li>• State when it would be most appropriate to describe data by placing it in a contingency table or by calculating values such as the mean, median, variance, standard deviation, quartiles and interquartile range.</li> <li>• Explain the advantages of a box-plot for the graphical display of quantitative data and interpret box-plots.</li> <li>• Describe possible sources and the nature of qualitative data.</li> <li>• Differentiate between basic qualitative data analysis and more advanced forms of qualitative data analysis.</li> <li>• Describe Creswell's five basic steps, and Denscombe's four basic steps, in qualitative data analysis.</li> <li>• Discuss the importance of Denscombe's five key decisions in the analysis of qualitative data.</li> <li>• Discuss the use of software in qualitative data analysis.</li> <li>• Define morality, ethics and bioethics.</li> <li>• Explain what a moral theory is and how such theories can be used in ethics.</li> <li>• Discuss the key features of utilitarian, Kantian, rights and virtue moral theories and use these theories</li> </ul>
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							<p>to critically evaluate moral problems.</p> <ul style="list-style-type: none"> <li>• Discuss the concept of moral virtue and five focal virtues or health professionals; compassion, discernment, trustworthiness, integrity and conscientiousness.</li> <li>• Differentiate between clinical practice and research, clearly specifying when an intervention ceases to be clinical practice and becomes research.</li> <li>• Explain why ethics is necessary in research.</li> <li>• Describe the ethical principles of respect for autonomy, non-maleficence, beneficence and justice, and how these relate to ethical practice in research.</li> <li>• Discuss the ethical principles outlined in the South African Department of Health Research Ethics Guidelines (2004).</li> <li>• Discuss the importance of and requirements for informed consent in any form of health research.</li> <li>• Clearly explain special considerations with informed consent in the following categories: <ul style="list-style-type: none"> <li>➤ Patients undergoing emergency treatment;</li> <li>➤ Minors;</li> <li>➤ Patients with a mental illness or handicap;</li> </ul> </li> <li>• Discuss best practices for obtaining informed</li> </ul>
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							<p>consent for research participation.</p> <ul style="list-style-type: none"> <li>Describe the requirements for consent when use is made of clinical records in both prospective and retrospective research designs.</li> <li>Explain the importance of and requirements for patient confidentiality of health research and how confidentiality may be achieved.</li> <li>Differentiate between confidentiality and anonymity and explain how anonymity may be achieved and the consequences of this.</li> <li>Discuss the different types of research vulnerability and how the rights of vulnerable groups can be protected in research.</li> <li>Describe the responsibilities of a researcher before and after a study.</li> <li>Discuss scientific integrity and misconduct (including plagiarism) and steps that can be taken to recognise, report and combat these.</li> <li>Give an overview of the steps in the research process, from choosing a research topic to writing and handing in the completed research report.</li> <li>Discuss the role of the research supervisor.</li> </ul>
Structural Collapse	SCR01Y4	100%	0%	8	10	To provide the student with the	Throughout completion of this module, the following

Rescue						<p>necessary knowledge, skills and techniques to access and extricate entrapped victims from collapsed structures. The module focused on the collapsed structures but drew upon the outcomes from all other rescue modules which were applicable to the structural collapse rescue environment.</p>	<p>learning outcomes were achieved:</p> <ul style="list-style-type: none"> <li>• Structural collapse incident safety <ul style="list-style-type: none"> <li>○ Identify components of safety that need to be identified during all phases of structural collapse incidents.</li> <li>○ Discuss hazard recognition and identify what needs to be considered during the initial building assessment.</li> <li>○ Comprehensively discuss the mitigation of hazards.</li> <li>○ Discuss the "Lookout", "Communication", "Escape Routes" and "Safety Zones" (LCES) principles.</li> <li>○ Explain risk assessment in the structural collapse environment.</li> <li>○ Discuss PPE used in structural collapse incidents</li> </ul> </li> <li>• Structural collapse engineering systems and collapse patterns <ul style="list-style-type: none"> <li>○ Explain the effect of compression, tension, bending and shear forces on wood, steel, masonry and concrete.</li> <li>○ Explain ductile and brittle properties of above mentioned building materials.</li> <li>○ Discuss vertical and lateral load resistant forces.</li> <li>○ Identify man-made and natural causes for structural collapse.</li> <li>○ Discuss and explain different building</li> </ul> </li> </ul>
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							<p>construction types with reference to:</p> <ul style="list-style-type: none"> <li>○ Identify the various types of building construction.</li> <li>○ List the various warning signs that should be considered, for each construction type, to indicate significant damage and potential collapse.</li> <li>○ Identify the common collapse pattern for each building type.</li> <li>○ Identify the possible location of victims per construction type.</li> <li>○ Discuss methods to mitigate hazards in each of the construction types.</li> <li>○ Identify the most appropriate search technique for each construction type</li> </ul> <ul style="list-style-type: none"> <li>• Information gathering and building identification <ul style="list-style-type: none"> <li>○ Briefly explain the phases of a structural collapse incident.</li> <li>○ Elaborate on the initial phases of task force deployment.</li> <li>○ Apply basic strategies in the initial information gathering stage.</li> <li>○ Explain team deployment at a structural collapse incident.</li> <li>○ Demonstrate structure hazards and evaluation marking.</li> <li>○ Demonstrate the marking of an area where a patient has been identified.</li> <li>○ Discuss principles of building triage.</li> </ul> </li> <li>• Shoring techniques</li> </ul>
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							<ul style="list-style-type: none"> <li>○ Provide a definition of a “shore”.</li> <li>○ Explain the principles of shoring.</li> <li>○ Explain the properties of shoring systems.</li> <li>○ Discuss the “six-sided approach” to shoring.</li> <li>○ Demonstrate how to effectively construct and effectively install the following: <ul style="list-style-type: none"> <li>▪ Vertical Shores</li> <li>▪ T-spot shores</li> <li>▪ Door/window shores</li> <li>▪ Cribbing</li> <li>▪ Laced posts</li> <li>▪ Mechanical shores</li> <li>▪ Sloped floor shores</li> </ul> </li> <li>○ Horizontal shores</li> <li>○ Raker shores <ul style="list-style-type: none"> <li>▪ Flying raker</li> <li>▪ Split pole raker</li> <li>▪ Flying raker</li> <li>• Breaching, breaking, cutting and burning</li> </ul> </li> </ul>
Trench Rescue	TRR01Y4	100%	0%	7	10	<p>This module will provide you with the necessary knowledge, skills and techniques to extricate entrapped victims involved in trench and excavation incidents. The module will focus on the fundamentals of shoring of collapsed trenches and the access, stabilisation and removal of entrapped victims</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <p>Introduction to trench rescue</p> <p>Provide a definition of a trench.</p> <p>Label the “anatomy” of a trench.</p> <p>Explain the various uses of trenches.</p> <p>Discuss key legislative concepts surrounding working in and around trenches.</p> <p>Discuss types of trench incidents.</p> <p>Discuss dangers associated with trench rescue work.</p> <p>Discuss the effects of trench incidents.</p>

						<p>Identify the misconceptions that laypersons have regarding trenches and trench collapse.</p> <p>Identify which factors may contribute to trench collapse.</p> <p>Classify the different soil types and explain the implications of each type for trench rescue operations.</p> <p>Trench rescue equipment</p> <p>Discuss the types of equipment used for trench rescue with regards to the following:</p> <p>Materials used to manufacture equipment</p> <p>Functions of each piece of equipment</p> <p>Correct inspection of equipment</p> <p>Advantages and disadvantages of equipment</p> <p>Safe operation of equipment used in trench rescue</p> <p>Discuss the use of different types of PPE used in trench rescue operations.</p> <p>Demonstrate the ability to decide upon the use of appropriate pieces of PPE and the correct use thereof.</p> <p>Trench rescue operations</p> <p>Describe the activities associated with each phase of the trench rescue.</p> <p>Discuss how to prepare for trench rescue incidents.</p> <p>Discuss relevant information to obtain when receiving the call.</p> <p>Identify the correct parking of vehicles at a trench rescue incident.</p> <p>Discuss how to differentiate between a general area and a rescue area</p> <p>Explain how to perform a primary assessment of a trench rescue incident.</p> <p>Identify hazards and describe ways to mitigation these hazards.</p> <p>Explain how to find buried victims using clues.</p>
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						<p>Explain how to perform a secondary scene assessment.</p> <p>Explain how you would determine the appropriate additional resources needed to assist in the rescue operations.</p> <p>Explain how to ensure that rescuers are protected at all times during the rescue operation</p> <p>Discuss how to make the general area safe.</p> <p>Discuss how to make the rescue area safe</p> <p>Discuss how to make the trench lip safe</p> <p>Discuss to make the trench safe</p> <p>Discuss alternative techniques for trench safety</p> <p>Explain how to establish a command post Department of Emergency Medical Care</p> <p>Discuss methods of supporting family and friends of the victims</p> <p>Discuss how to effectively manage the media •</p> <p>Discuss steps to be taken when a trench cannot be made safe</p> <p>Discuss certain injuries and pathologies related to trench rescue:</p> <p>Crush injuries</p> <p>Compartment syndrome</p> <p>Rhabdomyolysis</p> <p>Traumatic asphyxiation</p> <p>Describe the use of machines to dig</p> <p>Discuss methods of dewatering the trench during digging operations:</p> <p>Pumping from the trench floor</p> <p>Spot dewatering</p> <p>Making a sump</p> <p>Discuss how to adjust the shoring if the ground is frozen</p> <p>Discuss how to monitor or use a crane, backhoe and aerial apparatus to remove the patient</p> <p>Practical skills outcomes</p>
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						<p>Act in a safe manner during all trench rescue training scenarios.</p> <p>Correctly don and doff all PPE used for trench rescue.</p> <p>Create appropriate work areas for trench rescue incidents.</p> <p>Correctly stage an area for all trench rescue equipment during training.</p> <p>Fulfil the role of each member within a trench rescue team.</p> <p>Demonstrate the safe operation of all trench rescue equipment in a scenario.</p> <p>Demonstrate the correct parking of vehicles at a trench rescue incident.</p> <p>Demonstrate how to perform a primary assessment.</p> <p>Demonstrate how to perform hazard identification and hazard mitigation.</p> <p>Demonstrate how to perform a secondary scene assessment.</p> <p>Demonstrate how to ensure that rescuers are protected at all times during the rescue operation.</p> <p>Demonstrate how to make the general area safe.</p> <p>Demonstrate how to make the rescue area safe.</p> <p>Demonstrate how to make the trench lip safe.</p> <p>Demonstrate how to make the trench safe.</p> <p>Demonstrate alternative techniques for trench safety.</p> <p>Demonstrate how to create a supply point.</p> <p>Demonstrate how to continue hazard control.</p> <p>Demonstrate the application of principles used to shore trenches safely.</p> <p>Demonstrate how to shore accidents with a single side wall cave-in.</p>
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						<p>Demonstrate how to shore accidents with a double side wall cave-in.</p> <p>Demonstrate how to shore accidents without a cave-in.</p> <p>Demonstrate the shoring of a hand dug well.</p> <p>Demonstrate the ability to use shore trenches using a variety of material as discussed in study unit B.</p> <p>Demonstrate the correct technique of shoring special trench designs:</p> <p>T trenches</p> <p>L Trenches</p> <p>X Trenches</p> <p>Demonstrate how to render emergency care in the trench.</p> <p>Demonstrate how to safely adjust shoring to reach and remove victims</p> <p>Demonstrate how to safely use supplementary sheeting and shoring</p> <p>Demonstrate methods of dewatering the trench during digging operations:</p> <p>Pumping from the trench floor</p> <p>Spot dewatering</p> <p>Making a sump</p> <p>Demonstrate how to package the patient for removal</p> <p>Demonstrate how to remove the patient from the trench</p> <p>Demonstrate how to use a hand line and ladder to remove a patient from a trench</p> <p>Demonstrate how to Remove tools and equipment safely</p> <p>Demonstrate how to Remove sheeting and shoring of various materials correctly and safely</p> <p>Demonstrate how to correctly service all tools and equipment used in the operation</p> <p>Demonstrate how to complete required reports</p> <p>Demonstrate how to Perform a team / personnel debrief</p>
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Wilderness Search and Rescue	WSR01Y3	100%	0%	7	12	<p>The aim of this module was to provide the student with the necessary knowledge, skills and insight needed to safely and effectively co-ordinate and / or participate in a wilderness search and rescue operation.</p>	<p>Throughout completion of this module, the following learning outcomes were achieved:</p> <p>Discuss the role of the medical rescuer in wilderness search &amp; rescue</p> <p>Explain the importance of proper planning</p> <p>Discuss the physical and mental preparation needed for managing wilderness search &amp; rescue incidents.</p> <p>Explain the role of as well as the activation procedures for any of the support services covered</p> <p>Classify a wilderness area according to geography and vegetation</p> <p>Identify and discuss the dangers associated with wilderness search &amp; rescue activities</p> <p>Making use of a map or description of an area, classify the area and describe the possible dangers associated with the area.</p> <p>Activate any of the above mentioned support / allied services.</p> <p>Discuss the correct equipment needed for efficient wilderness search &amp; rescue operations</p> <p>Explain the concept of a layered clothing system for temperature extremes</p> <p>Explain the general principles of packing a back pack</p> <p>Discuss the qualities of a good sleeping bag</p> <p>Discuss the different types of tent used as well as some advantages and disadvantages of each</p> <p>Discuss the types, construction, advantages &amp; disadvantages of the different types of cookware and stoves</p> <p>Explain the principles of sanitation and personal hygiene in a wilderness area</p> <p>Discuss the importance of lighting as well as types of lighting equipment available</p>
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						<p>Give a brief description of the history behind the making and use of maps</p> <p>List &amp; briefly explain the construction of the common map projections</p> <p>Discuss the functioning and correct use of magnetic compasses</p> <p>Discuss the value of aerial photography and the correct use of aerial photographs</p> <p>Explain the uses of the following additional items of navigation equipment:</p> <p>Star charts</p> <p>Protractors</p> <p>Altimeters</p> <p>Discuss in detail how the global positioning system (GPS) operates</p> <p>Discuss the advantages, disadvantages and limitations of using a GPS system</p> <p>Discuss the different communication systems available for wilderness search and rescue operations</p> <p>Explain the difference between simplex and repeater radio communication</p> <p>Explain how to select an appropriate site for, and set up a repeater site</p> <p>Explain the effectiveness and correct use following signalling devices:</p> <p>Smoke grenades</p> <p>International ground to air panels</p> <p>Lights</p> <p>Heliographs</p> <p>Pencil flares</p> <p>Thousand foot vary flares</p> <p>Air horns</p> <p>Whistles</p> <p>Discuss the importance of proper nutrition during wilderness operations</p> <p>Explain the how to formulate and operate a rationing system for food and water</p> <p>Explain how to locate water in a wilderness area</p> <p>Explain the operating principles, construction and use of a distillery</p>
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						<p>Discuss methods of purifying water in a wilderness setting</p> <p>Explain methods of locating food in a wilderness area</p> <p>Discuss the identification construction and operating of simple traps and snares</p> <p>Discuss the correct methods of transporting &amp; storing food &amp; water</p> <p>Making use of simple diagrams explain the construction of an emergency shelter</p> <p>Discuss the criteria one needs to take into account when selecting a natural shelter</p> <p>Discuss the criteria one needs to take into account when selecting a camp site</p> <p>Explain the various methods of protecting a camp site from invasion</p> <p>Explain the grid reference system for navigation</p> <p>Calculate distances using the scale on a map</p> <p>Calculate the scale of a map or photograph using the known distances method</p> <p>Convert from decimal to statutory format for quotation of co ordinates</p> <p>Identify &amp; name the conventional signs used in conventional maps</p> <p>Read slope profiles, identify features and calculate gradients using contour lines</p> <p>Construct a cross section from one point to another utilising contour lines</p> <p>Calculate the vertical exaggeration of a cross section</p> <p>Discuss the map referencing system with regard to purchasing of maps</p> <p>Discuss care for, storage and transportation of maps</p> <p>Calculate mean and annual change in magnetic declination</p> <p>Calculate bearings, back bearings and triangulate position</p>
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						<p>Correctly orientate a map using features and magnetic bearing</p> <p>Correctly orientate a map / calculate ones positions using coordinates</p> <p>Discuss the principles of navigating by features</p> <p>Explain the differences and principles of night navigation</p> <p>Discuss the criteria / considerations one needs to take into account when planning a route</p> <p>Discuss methods of estimating time and distance</p> <p>Discuss the importance of physical and mental ability for wilderness search &amp; rescue operations</p> <p>Correctly pack a back pack</p> <p>Pitch a survival tent</p> <p>Safely &amp; effectively use a gas stove or prima stove</p> <p>Correctly operate a compass and obtain accurate bearings</p> <p>Construct a cross section</p> <p>Correctly operate a satellite phone</p> <p>Correctly operate a simplex radio system</p> <p>Set up a repeater site</p> <p>Locate, purify and store water</p> <p>Manufacture &amp; operate a distillery</p> <p>Build &amp; operate a simple trap or snare</p> <p>Construct an emergency shelter</p> <p>Operate a heliograph signalling device effectively</p> <p>Accurately navigate and plan routes</p> <p>Function as a member of a wilderness search &amp; rescue team</p> <p>Utilize a GPS system to navigate to a point</p> <p>Utilize a GPS system to backtrack along a route</p> <p>Utilize a GPS to mark a point for future use</p> <p>Use a map and compass to shoot bearings and triangulate your position</p> <p>Orientate your map using a compass and known features</p>
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						<p>Effectively operate a GPS system</p> <p>Construct a cross section</p> <p>Safely operate a camping stove for heating water and or cooking purposes</p> <p>Purify dirty water for drinking</p> <p>Pack a backpack</p> <p>Make an intelligent selection of food, water and camping gear that you will need for your given task.</p> <p>Calculate and report of coordinates</p> <p>Identify features</p> <p>Formulate a search plan correctly</p> <p>Discuss interview techniques and questions</p> <p>Discuss the importance of written records</p> <p>Explain the criteria surrounding the selection of a level of response</p> <p>Discuss the function and operation of a primary field team</p> <p>Explain the purpose of callout procedures and notification during a rescue operation</p> <p>Discuss the importance of central correlation of all information</p> <p>Describe the various search techniques</p> <p>Discuss the principles of clue finding and probability of detection</p> <p>Explain how to correctly call off a search</p> <p>Discuss the purpose of a post incident debriefing session</p> <p>Explain the correct method of establishing a command post or search management HQ</p>
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## POSTGRADUATE DIPLOMA IN CLINICAL SIMULATION (E9CSMO)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Adult Learning and Simulation Pedagogy	ASP01AO ASP01BO	100%	0%	8	24	Module two aims to assist the learner in understanding adult learning theories and their application to simulation-based teaching, learning and assessment. The module also provides a theoretical framework and foundation for application and defence of an integrative approach to embedding simulation into the curriculum.	At the end of this module, the learner should be able to apply adult learning theories to the construction and application of simulation-based learning experiences.
Clinical Simulation and Instructional Design	CSD01A O CSD01B O	100%	0%	8	24	This module focusses on the design and construction of simulation-based learning experiences and the appropriate application thereof. Students will be developed in all aspects associated with designing and facilitating simulation-based teaching, learning and assessment experiences.	At the end of this module, the learner should be able to design and implement simulation-based learning experiences using appropriate teaching, learning and assessment strategies.
Facilities and Resource Management	FRM01A O FRM01B O	100%	0%	8	12	In the facilities management module, the structure, functioning, storing and management of resources associated with simulation facilities will be addressed. This module also covers budgeting approaches for funding simulation technologies including health and safety considerations associated with	At the end of this module, the learner should be able to describe the core principles associated with the management of simulation facilities and related resources.

						operating simulation laboratories.	
Introduction to Simulation	ITS01AO ITS01BO	100%	0%	8	10	The Introduction to Simulation module focuses on the historical development of simulation as an activity/tool leading to its contemporary application in the field of health sciences education. Engagement with this module will develop the student's foundational knowledge on simulation. Such knowledge is required for critical reflection and scholarly discourse around the role and application of simulation for the development and assessment of clinical competence and related learning outcomes.	At the end of this module, the learner should be able to demonstrate a deep understanding of the development and application of clinical simulation as a strategy for health professions education.
Simulation Practices (Portfolio)	SIP01YO	100%	0%	8	24	This module focuses on the construction of a portfolio of evidence. It is an opportunity to provide the student an opportunity to showcase evidence that they have been able to meaningfully implement and integrate taught concepts mastered during the programme within their own teaching learning and assessment context.	At the end of this module, the learner should be able to design, implement and assess a simulated teaching activity.
Simulation and Research	SIR01AO SIR01BO	100%	0%	8	12	This module involves the critical appraisal of research in the simulated environment. The module provides the student with an ability to meaningfully integrate current evidence informed findings within their teaching with an appreciation of the advantages and	At the end of this module, the learner should be able to critically appraise research methodologies and approaches used in simulation contexts.

						limitations associated with conducting research using simulation.	
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## HS12.5 DEPARTMENT OF ENVIRONMENTAL HEALTH

### BACHELOR OF ENVIRONMENTAL HEALTH (B9ENV1)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Air Quality Management	AQMEH04	100%	0%	7	20	<p>The primary purpose of this module is to prepare students, to assume an effective advocator and change agent role in the community and industries, using a variety of tools and techniques.</p> <p>This module will equip students with some of the conceptual resources, analytical skills and empirical materials that are required to effectively manage environmental pollution.</p>	<p>At the end of this module, students should be able to do the following:</p> <ul style="list-style-type: none"> <li>Describe and define environmental pollution in terms of air quality.</li> <li>Describe the impact of pollution on environment, economy, social process, and human health.</li> <li>Comprehend the basic elements of air pollution and climate change that affect human health and diseases.</li> <li>Identify air pollution and differentiate various sources involved.</li> <li>Describe development of environmental pollution legislation, its delivery and implementation pre/post 1994.</li> <li>Demonstrate ability to analyse and criticize different pieces of environmental legislation.</li> <li>Conduct pollution investigation and undertake sampling using existing acceptable procedures.</li> <li>Analyse and interpret laboratory results and make appropriate recommendations.</li> <li>Demonstrate an understanding of the</li> </ul>



							<p>natural components of the atmosphere and the different effects that may result from pollution.</p> <p>10. To understand the principles of intervention that will contribute to the effectiveness of the Environmental Health Practitioner's role within the community.</p>
Anatomy & Physiology	APENV01	100%	0%	6	20	<p>Anatomy and Physiology provide foundational knowledge for pathology and clinically related subjects. The content covered in this module includes an orientation of the human body; basic chemistry for Anatomy and Physiology; the cell and body tissues; skin and body membranes; the skeletal system; muscle; the nervous system and senses; the endocrine system; blood and the cardiovascular system, the respiratory system; the lymphatic system and body defenses; and the digestive-, urinary-, and reproductive systems.</p>	<ul style="list-style-type: none"> <li>• Introduction to human anatomy and physiology</li> <li>• Chemical basis of life</li> <li>• Integumentary system</li> <li>• Skeletal system</li> <li>• Nervous system 1: basic structure and functions</li> <li>• Endocrine system</li> <li>• Cardiovascular system</li> <li>• Lymphatic system and immunity</li> <li>• Digestive system</li> <li>• Nutrition and metabolism</li> <li>• Respiratory system</li> <li>• Urinary system</li> <li>• Water electrolytes and acid-base balance</li> </ul> <p>Reproductive system</p>
Applied Communications Skills	COM1001	50%	50%	5	12	<p>This module is designed to develop your abilities with regard to effective communication within the context of the dynamic, modern social and work environment.</p>	<ul style="list-style-type: none"> <li>• Introduction to Human Communication</li> <li>• Perception, Self, and Communication</li> <li>• Language and Meaning</li> <li>• Nonverbal Communication</li> <li>• Listening and Critical Thinking</li> <li>• Interpersonal Communication</li> </ul> <p>Intercultural Communication</p>
Biochemistry	BICH1A1	50%	50%	6	6	<p>The purpose is to gain an understanding of how molecules unite and associate to form large functional units</p>	<ul style="list-style-type: none"> <li>• Recognise and describe the four major types of molecules and three major types of polymers found in all</li> </ul>

						and finally integral organisms that acquire and use energy and sustain their identity across generations.	<p>living organisms</p> <ul style="list-style-type: none"> <li>• Describe and explain the functions of the four major types of molecules and three major types of polymers found in all living organisms]</li> <li>• Describe and explain the flow of genetic information in living organisms</li> <li>• Describe and explain the role of enzymes in living organisms</li> </ul> <p>Recognise, describe and explain the flow of energy, carbon and reducing equivalents in the major metabolic pathways i.e. glucose metabolism, the citric acid cycle, electron transport and oxidative phosphorylation, fatty acid metabolism, photosynthesis and nitrogen metabolism</p>
Chemistry	CETH1Y1	50%	50%	5	12	The primary purpose of this module is to develop the basic knowledge, understanding and practical skills of chemical principles and techniques of general chemistry as required for further modules in Environmental Health.	<p>1.1 Define matter. 1.2 List the three states of matter and their properties. 1.3 Distinguish between physical and chemical properties and changes. 1.4 Distinguish between elements, compounds and mixtures (homogeneous or heterogeneous). 1.5 Identify the most important subatomic particles. 1.6 Draw Bohr models of the first ten elements.</p> <p>2.1 Define covalent and ionic bonds. 2.2 List the differences between covalent and ionic compounds. 2.3 Name and write formulae of covalent and ionic compounds as well as acids.</p> <p>3.1 Balance chemical equations. 3.2 Differentiate between the four types of reactions. 3.3 Write equations representing the four types of reactions. 3.4 Define atomic mass, the</p>

							mole and molar mass. 3.5 Interconvert between mass, mole and number of particles. 3.6 Calculate the percentage composition of elements in a compound.
Community Development 1	CDENV02	100%	0%	6	15	This module aims to develop skills that will enable students to promote the well-being of communities; and to develop skills needed to implement strategies to prevent ill health of people in their living, recreational and general environments.	<p>At the end of the module students should be able to:</p> <ul style="list-style-type: none"> <li>• To profile an area / ward</li> <li>• To be able to differentiate between a community needs, wants and available resources</li> <li>• To be able to carry themselves professionally both in the office and in communities</li> <li>• Be able to contribute positively to policies, government gazettes, regulations and acts in the environmental health profession</li> <li>• To be able to fully execute an environmental health intervention for the purpose of upliftment</li> <li>• To be able to put together an information, education and communication material</li> </ul> <p>To be able to understand the various type of data collection and analysis techniques as well as monitoring and evaluation in communities</p>
Computing Literacy	CSL01A1	50%	50%	5	6	The purpose of this module is to introduce students to general computer applications commonly used in financial services operations. Students will be equipped to use the Word Processing application to solve business problems, to use Presentation	The study of the subject Computer Literacy must be used to enhance all your other subjects. It is an entry level subject, and you have to extract from the course what you need to develop further.

						software and a Spreadsheet application. These skills are necessary for academic and financial industry application.	
Disaster Management	DMENV04	100%	0%	8	10	To learn theoretical and practical processes of disaster management (disaster management, response, and recovery) and relate their interconnections, particularly in the field of the Public and Environmental Health aspects of the disasters.	<ul style="list-style-type: none"> <li>• Demonstrate phases of relief work before, during and after disaster</li> <li>• Describe the major political, economic, social and cultural factors which affect the public health of a population during disasters</li> <li>• Understand the disaster cycle of preparedness, response, reconstruction and mitigation;</li> <li>• Define the factors that influence risks to a population from a hazard and steps which can minimize these risks;</li> <li>• Organize disaster/emergency management functions, organizations, and activities using concepts and terms explained in the course.</li> <li>• Assess and address the impact of disasters on public health;</li> <li>• Adequately prepare for, respond to, recover from, and mitigate the adverse environmental health impacts of disaster;</li> <li>• Increase community, public and private sectors awareness of environmental health disaster management;</li> <li>• Develop and implement disaster management plan in the event of a disaster.</li> <li>• Implement prevention strategies for survival in disaster times;</li> <li>• Manage the Public and Environmental Health aspects of the disasters</li> </ul> <p>Demonstrate their knowledge and competence in skills to</p>

							assist the communities in responding to emergencies.
Environmental Epidemiology	EEENV03	100%	0%	7	20	<p>Its principal aim is to identify risk factors that can be averted or reduced so as to prevent or reduce the risk of future disease and promote public health.</p>	<p>At the end of the module students should be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate the understanding of the theoretical content of epidemiological principles as well as the role of epidemiology in public health.</li> <li>• Evaluate causal associations in epidemiological studies using causal criteria</li> <li>• Calculate and interpret basic measures of disease occurrence including incidence, prevalence, morbidity and mortality measures,</li> <li>• Calculate and interpret the commonly used measures of association such as, relative risk, odds ratio.</li> <li>• Identify and apply appropriate study designs used in epidemiology and display the ability to present and interpret epidemiological data.</li> <li>• Should demonstrate the understanding of the role of an Environmental Health practitioner in the disposal of the dead</li> <li>• Identify causes of non-communicable diseases, their impact on society and how they could be prevented.</li> <li>• Should be able to demonstrate the knowledge how diseases surveillance strategies are implemented locally and at international level</li> <li>• Apply different epidemiological principles to specific areas (toxicology and epidemiology)</li> <li>• Describe how epidemiological methods and data can be useful in planning, implementing, and evaluating public health surveillance systems.</li> <li>• Should be able to carry out an outbreak investigation as an</li> </ul>

							<p>independent practitioner or as part of an outbreak investigation team</p> <ul style="list-style-type: none"> <li>• Describe the steps in the epidemiological approach to studying the relationships between exposure and disease or other relevant health outcomes.</li> <li>• Critically analyse and interpret epidemiological literature considering the roles of chance, bias, and confounding as possible explanations for study findings.</li> </ul> <p>Perform a human health risk assessment</p>
Environmental Health Management and Administration	EHMAA03	100%	0%	7	20	<p>The purpose of this module is to advance the learner's knowledge and skills that will enable them to apply to health policy formulation in South Africa including managerial legislation at national, provincial and local government levels; the health system plan of South Africa; stakeholders in the health sector; administrative processes of public administration in practices; office practice management in the workplace and scientific report writing skills in the workplace in the workplace.</p>	<ul style="list-style-type: none"> <li>• Introduction to Environmental Health Management and Administration</li> <li>• Skills for Good Office Practice</li> <li>• The Dynamics of Public Health Administration in South Africa</li> <li>• Environmental Health in context</li> <li>• Legal aspects of health service rendering</li> </ul> <p>Dispute Resolution</p>
Environmental Management (NEMA & EMI)	EMNME04	100%	0%	8	15	<p>The purpose of this module is to enable students to: apply legal tools in order to successfully prosecute offenders with regard to environmental legislation. This would include the role of local authorities in environmental compliance and enforcement in terms of the Constitution; Compliance and enforcement duties of local authorities in terms of national</p>	<ul style="list-style-type: none"> <li>• Legal context for environmental management compliance and enforcement</li> <li>• Environmental management inspector</li> <li>• Environmental management compliance inspection and Investigation – industry</li> <li>• Environmental management enforcement and prosecution</li> </ul>

						environmental legislation	
Environmental Pollution: Water, Waste and Air	EPWWA02	100%	0%	7	15	The purpose of this module is to introduce students drinking water quality, municipal waste management and indoor air pollution at household level, whether informal, rural, peri-urban or urban settings.	<ul style="list-style-type: none"> <li>• Define water pollution and interpret water pollution prevention legislation</li> <li>• identify and link effects and categories of water pollutants to their sources</li> <li>• Implement sound sampling routines for water monitoring and laboratory analysis for interpretation of water sample results</li> <li>• Demonstrate knowledge of the various water treatment methods</li> <li>• Understand and detect any shortcomings within a water purification/ waste, water/ sewage treatment processes</li> <li>• Educate communities on how to purify drinking water at household level</li> <li>• Understand and apply the SABS standards on water quality</li> <li>• Identify various sources, define and explain waste and waste management</li> <li>• Classify and analyse the composition and properties of municipal solid waste</li> <li>• Understand the importance of a service standard within a municipality</li> <li>• Demonstrate the importance of waste management and understanding of waste management processes</li> <li>• Identify and recommend appropriate waste management equipment.</li> <li>• Facilitate and engage communities to actively participate in waste matters.</li> <li>• Distinguish between criteria pollutants and its associated health effects.</li> <li>• Understand the relationship between contaminant sources, exposure pathways and receptors</li> <li>• Describe and illustrate</li> </ul>

							air pollution dispersion, types of models in Urban- rural climatic contrasts
Food and Meat Hygiene	FMHEEH0	100%	0%	6	35	The purpose of the module is to equip students with the knowledge and skills that they should apply in the food industry in terms of principles of general design and layout of food premises; and; equipment (Including abattoirs and farm dairies) and good hygiene practices and good manufacturing practices.	<ul style="list-style-type: none"> <li>• Introduction to food and meat hygiene</li> <li>• Food premises inspection</li> <li>• Food premises: formal and informal</li> <li>• Pathogens, hazards and changes in food</li> <li>• Food poisoning</li> <li>• Abattoir layout, practices and meat inspection</li> </ul>
Food Processing and Safety	FPSEH03	100%	0%	7	20	The purposes of the module are to enable students to understand the basic principles of the main methods of food processing, preservation and safety, Students will get familiar with methods such as canning, cooking, cold storage, pasteurization, aseptic processing, freezing and irradiation. After completing this module, students will be able to design corresponding methods of foods processing and safety, choose the right equipment and solve relevant application problems. Students will be able to apply the principles of ethics and professionalism, they will be able to develop and apply processes of information gathering during identification, evaluation, monitoring and	<ul style="list-style-type: none"> <li>• Introduction to food processing and safety</li> <li>• Principles of food processing and safety</li> <li>• Methods of food processing and safety</li> <li>• Food safety standards</li> <li>• Food processing industries</li> </ul> <p>Factors that affect food safety in the food industry</p>



						control actions and to interpret and apply the appropriate legislation, standards and codes applicable to import, export, production and processing within a given context.	
Food Safety Management	FSMEH04	100%	0%	8	20	<p>The purpose of the module is to equip students to: Portray the theoretical content of the requirements that a Food Safety Management System (FSMS) must consist of SANS/ISO 22000, SANS 10330, ISO/TS 22002-1. To be able to document a FSMS based on the requirements of the above-mentioned standards. Identify food safety hazards and to conduct a hazard analysis in accordance with the requirements of the standards To Be able to independently assess FSMS documentation compiled by food establishments and to compile a report indicating the outcomes of the assessment. Portray the rules of ethics appropriate to the evaluation of food establishments</p>	<ul style="list-style-type: none"> <li>• Introduction to food safety management systems</li> <li>• Strategic plan for food safety (WHO)</li> <li>• Planning and implementing a food safety management system</li> <li>• Management of pre-requisite programmes for food safety</li> <li>• Auditing of Food safety management systems</li> <li>• Resource management for food safety</li> <li>• Food safety communication</li> </ul>
Infectious Disease Epidemiology	IDEEH02	100%	0%	7	15	<p>Enable you to understand the environment within which diseases occur by focusing on:</p> <ul style="list-style-type: none"> <li>• The underlying factors (physical, biological, economic, social, psychological and political) that shapes the environment within which ill health occurs;</li> <li>• Modes of transmission of disease causing</li> </ul>	<ul style="list-style-type: none"> <li>• History and General Principles of Infectious Disease Epidemiology</li> <li>• The Infectious Disease Process</li> <li>• Prevention and Manage of Infectious Diseases</li> <li>• Disease Control and Public Health Surveillance</li> <li>• Epidemiology of Communicable Diseases</li> <li>• Epidemiology of Non-Communicable Diseases</li> </ul>

						agents; • Significant clinical manifestations of ill health, and • Prevention and control of these conditions or events  As an Environmental Health Practitioner (EHP) in the making, your role within your future working environment will be largely influenced by activities aimed at the primary prevention and control of communicable diseases.	<ul style="list-style-type: none"> <li>Epidemiology of Helminth Infections</li> <li>Healthcare-Associated Infections</li> <li>Epidemiology and Manage of Malaria</li> <li>Emerging and re-emerging infections Disease</li> <li>Role of social determinants infectious disease epidemiology within South African context</li> </ul>
Introduction to Environmental Health	ITENV01	100%	0%	6	6	The purpose of the module is to equip learners with knowledge on the scope of practice of Environmental Health and to enable learners to understand the principles and importance of ethics and professionalism, as it is applicable to Environmental Health Practitioners and as set out by the Health Professions Council of South Africa (HPCSA).	<ul style="list-style-type: none"> <li>Introduction to Professional Conduct and Ethics</li> <li>HPCSA requirements with reference to the Health Professions Act 56 of 1974</li> <li>Scope of Practice for Environmental Health</li> <li>Environmental Health in Context</li> <li>South African Ethnic Groups, Beliefs and Cultures</li> </ul>
Management Practice	MPENV04	100%	0%	8	12	The purpose of this module is to equip students with current issues and trends of management practices within the scope of Environmental Health. This course is career oriented, and assessments will mainly be based on the application of theory in line with practical application.	<ul style="list-style-type: none"> <li>Management Techniques</li> <li>Human Resource Management</li> <li>Financial Management</li> <li>Organizational Development</li> </ul>
Microbiology	MCBH1Y1	50%	50%	5	20	The module aims at preparing students to understand and discuss the standard principles of microbiology and provide students with the necessary	Understand and describe the interaction of microorganisms with the human population Understand how scientific theories are developed, refined, supported or refuted as new data or its

						knowledge and competence to conduct standard laboratory experiments in relation to the requirements of the Environmental Health program.	<p>interpretations become available.</p> <p>Understand the scope of microbial diversity</p> <p>Understand the application of microscopy to imaging microorganisms</p> <p>Understand the representative cell morphologies of prokaryotes</p> <p>Understand the cytoplasmic membranes, chemo taxis and transport</p> <p>Understand the microbial growth as the ultimate process in the life of a cell</p> <p>Understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles</p> <p>Understand how these cellular components are used to generate and utilize energy in cells</p>
Occupational Health and Safety: Chemical / Biological	OHSCB03	100%	0%	7	20	The purpose of this module is to introduce students to the chemical and biological environments, and exposure monitoring of chemical substances and biological agents in the occupational setting. Secondly, to anticipate, recognize and identify any health and safety issues attributed to exposures within the working environment and know what control mechanisms to recommend.	<p>At the end of this module, students should be able to:</p> <ul style="list-style-type: none"> <li>• Identify the departure point for an occupational hygiene program,</li> <li>• Evaluate the work environment for chemical toxicants and biological agents exposures,</li> <li>• Understand Industrial toxicology and the toxicological effects of toxicants,</li> <li>• Understand human physiological processes related to toxic chemical substances and biological agents,</li> <li>• Apply legislative concepts to control exposure to chemical and biological agents,</li> <li>• Recommend control actions for exposure related to chemical toxicants and biological agents.</li> </ul>
Occupational Health and	OHSMS04	100%	0%	8	22	The purpose of this module is to	At the end of this module, students should be able to:

Safety: Management Systems						comprehensively introduce students' systems of controls and management for occupational exposure to physical, chemical, biological stressors. Secondly, to design systems of controls and management for occupational exposures.	<ul style="list-style-type: none"> <li>• Design health risk assessments for all occupational stressors,</li> <li>• Recommend medical surveillance programmes,</li> <li>• Design occupational hygiene survey to monitor occupational exposures,</li> <li>• Recommend appropriate ventilation controls for indoor chemical processes,</li> <li>• Design ergonomics programmes,</li> <li>Design,</li> <li>• Design best occupational health and safety programmes to reduce compensation-related financial costs for industries.</li> </ul>
Occupational Health and Safety: Physical Stress	OHSPS02	100%	0%	7	20	The purpose of this module is to introduce students to physical hazards in the occupational settings. Secondly, to recognize and identify any health and safety issues within the working environment and know what control mechanisms to recommend.	At the end of this module, students should be able to: <ul style="list-style-type: none"> <li>• Implement strategies to ensure a safe and healthy environment in the workplace,</li> <li>• Identify, evaluate and monitor occupational physical hazards, and recommend appropriate control strategies.</li> <li>• Demonstrate knowledge of occupational physical stressors.</li> <li>• Maintain and control occupational health stressors.</li> <li>• Implement and apply appropriate norms and standards contained in the legislation.</li> <li>• Implement and apply the principles of Occupational health and safety legislation.</li> <li>• Communicate and negotiate best practices for health and safety with relevant fraternities.</li> </ul>
Physics	PHBH1Y1	50%	50%	5	20	The purpose of this module is to provide a factual knowledge of definitions, methods and principles in Physics, and provide a broad background knowledge of basic Physics to aid in the understanding and interpretation of future scientific and technological	Upon completion of this module, students should have an understanding of <ul style="list-style-type: none"> <li>• scientific measurement and calculations: units, scalars and vectors</li> <li>• mechanics: kinematics in one and two dimensions, forces and Newton's laws of motion as well as the work-energy theorem</li> <li>• hydrostatics: mass</li> </ul>

						development and to acquire the following life skills such as identifying and solving problems, working in groups and communicating effectively as is needed for Environmental Health.	density, pressure, Pascal's principle, Archimedes' principle • thermodynamics: temperature, thermal expansion, heat • waves and sounds: the nature of waves, periodic waves, the nature of sound, the speed of sound and the sound intensity • Electricity: electric forces and electric fields as well as the electric circuits. Experimental laboratory work will be conducted to aid delivery of these learning objectives
Planning for Built Environment	PFBEE02	100%	0%	6	12	<p>This module is intended as part of the acquisition of competence for all people who are involved in, or who intend to be involved in assessing, undertaking or administration of environmental health management projects, with a variety of organisations, be it government at various levels, private companies or non-governmental organisations.</p> <p>Applied competence against all learning outcomes pursued in this module will enlarge the general understanding and technical insight of the successful student in the role of the built environment, housing, ecology and sanitation. This involves the effective planning of housing, provision of sanitation, selection of sites for building and evaluation and drawing of building plans according to building regulations and guidelines. Applications should reflect knowledge of the following fields of expertise: legislation,</p>	<p><b>At the end of this module, you should be able to do the following:</b></p> <ul style="list-style-type: none"> <li>• Apply the relevant building legislation to plans and building structures and to make appropriate recommendations to improve plans (<u>Range</u>: Scrutinize plans, application processes, make recommendations on suitable drainage and factors relating to size, building materials, ventilation and structure).</li> <li>• Describe the different structures in buildings and structures (<u>Range</u>: residential and industrial premises)</li> <li>• Describe the provision of housing according to technical and social requirements, housing layout and space and density requirements.</li> </ul>

						building structures, drainage, ecological effects and social and physical effects of poor housing provision	<p>(Range: to be related to the most common problems including health, mental and social aspects)</p> <ul style="list-style-type: none"> <li>Identify the requirements for healthy housing</li> <li>Describe the appropriate sanitation systems and their requirements (selection criteria for most suitable toilet system)</li> </ul>
Research Methodology: Biostatistics	RMBEHB3	100%	0%	7	10	The purpose of the module is to introduce and prepare students studies to conduct research, from conception to analysing the data collected and understand, apply various data collection techniques as well as advantages and their disadvantages.	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>Explain how research produces scientific knowledge Describe the phases in the research process.</li> <li>Differentiate between the qualitative and quantitative approaches.</li> <li>Describe the setting of the research aim and objectives in relation to prioritized needs and problems.</li> <li>Describe, select and design instruments used for data collection and measurement e.g. Questionnaire.</li> <li>Describe how the quality of data can be ensured from design, data collection and data analysis stage in the research process. (Data management)</li> </ul> <p>To perform descriptive and inferential statistics</p>
Research Methodology: Module A	RMENVA2	100%	0%	6	8	The purpose of the module is to equip the learner with skills and knowledge related to research methods, theories and practices so as to be able to plan and participate formal and informal research in Environmental Health field.	<ul style="list-style-type: none"> <li>Introduction to Professional Conduct and Ethics</li> <li>Steps in a research process</li> <li>The Literature review</li> <li>Study Design</li> <li>Sampling</li> <li>Data collecting</li> <li>Measurement in Research</li> </ul>

							<ul style="list-style-type: none"> <li>• Data Analysis</li> <li>• Research Report</li> </ul>
Research Project	RPENV04	100%	0%	8	30	Curriculum of this module is research based, of which the student will have one full year to complete the module. Formal research is undertaken as a requirement. The research project lays a sound foundation for any research project that in future might cross their path. It involves applying the principles that student have learned in the subject Research Methodology. In this module of research project, students are exposed to the basic concepts of research and definitions that are important to understanding the fundamental principles and constructs behind research such as purpose, methods and the various types of research. The Faculty Higher Degrees and Research Ethics Committees (FHDC and REC) have guidelines which outline the research proposal submission process for students	Student must be able to demonstrate an independent research skill and be able to follow all the steps necessary to complete their research. Students are further expected to demonstrate their presentation skills and be able to do their research without plagiarism.
Sociology 1A	SOC1AA1	50%	50%	9	16	The course starts off with examining the concepts Power and the State; we locate the discussion within the theoretical frameworks of the Functionalist, Weberian and Marxist perspectives on power and the state. × The second section of the module explores the concept of work, as a purposeful activity and the evolution of	Compare different approaches to power and the state Highlight key differences between Marxist, Weberian, and Functionalist frameworks Distinguish between the notion of the state and government Explain, using examples, the three different types of states Explain the problems related to the definition of work Critically discuss classical

						the concept of work. More importantly, we examine how work transforms society and is transformed by society.	approaches to work, the labour process and unemployment. Apply these theoretical questions to the contemporary world. Understand what the Fourth Industrial Revolution means for the new world of work and Higher Education in South Africa. Demonstrate these abilities in a structured and concise academic essay.
Sustainability Development & Ecology	SDEEH01	100%	0%	5	8	To introduce the students to the concepts of sustainability and sustainable development, environmental planning, ecological fundamentals, environmental ethics, environmental risk, and environmental and resource economics. It also introduces the fundamentals of Environmental Impact Assessment (EIA), Integrated Environmental Management (IEM), and Strategic Environmental Assessment (SEA) and focuses on spatial concepts and principles of spatial planning, issues such as land tenure, settlement layout and morphology and land use management, spatial development, environmental management, housing, local government, and land reform.	At the end of this module, you should be able to do the following: <ul style="list-style-type: none"> <li>• Define sustainable development</li> <li>• Describe the link between environment and health</li> <li>• Changing pressures on health and the environment</li> <li>• Describe the ecological environment as a complex and dynamic system</li> <li>• Describe and understand the abiotic and biotic components of the ecosystems</li> <li>• Describe possible disasters or hazards that may impact negatively on the ecological environment</li> <li>• Describe Environmental Impact Assessment (EIA) as a form of environmental management and planning tool</li> <li>• Describe the legal aspects of sustainable development</li> <li>• Describe actions that can be taken to promote sustainable development</li> </ul>
Water Quality and Waste Management	WQAWM03	100%	0%	7	20	The module aims to prepare students for the infection	<ul style="list-style-type: none"> <li>• Understand the types of water in the healthcare facilities and how that</li> </ul>



						<p>prevention related to Water Quality and Waste Management in healthcare setting, Secondly it aims to help students gain an understanding of healthcare associated infections (HCAI) including types of infections, organisms responsible, how this can be monitored, proper cleaning and disinfection protocols etc. This includes the aspects of antimicrobial resistance and resistance towards chemicals used in the cleaning process.</p>	<p>will impact on staff and patient health.</p> <ul style="list-style-type: none"> <li>• Understand the concepts of hygiene as it relates to hand, personal and the clinical environment.</li> <li>• Discuss the occurrence and spread of E. coli (as indicator of faecal pollution) on surfaces in the various health settings.</li> <li>• Demonstrate knowledge of the various hygiene related pathogens and the diseases they cause</li> <li>• Distinguish between various forms of water related diseases and their impact on society</li> <li>• Illustrate understanding of the distribution of pathogens in communities and how this can be interrupted</li> <li>• Demonstrate and understand the effective hand washing technique and the influence on water sampling</li> <li>• Define a hazardous or toxic waste product.</li> <li>• Discuss properties of hazardous waste.</li> <li>• Describe how infectious, toxic or hazardous waste is being land filled.</li> <li>• Know how to avoid waste generation than to treat or dispose of waste</li> <li>• Determine whether or not a material must be considered infectious or hazardous chemical waste;</li> <li>• Determine the correct hazard category.</li> <li>• Analyse the components of hazardous waste by type;</li> <li>• Sorting and separation of each and every component is necessary;</li> </ul>
Water Quality and Waste Management	WQAWM04	100%	0%	8	20	<p>The purpose of this module is to equip the students with the knowledge that will enable them to explore through research the various technology options</p>	<ul style="list-style-type: none"> <li>• Discuss the characteristics, composition, supply, use and management of water</li> <li>• Identify and explain the methods of on-site innovative water</li> </ul>

						<p>and innovation for sustainable water quality management and integrated waste management in various settings that protects both public health and the environment.</p>	<p>treatment technology</p> <ul style="list-style-type: none"> <li>• Individual Accountability and Citizenship for sustainable water sources in South Africa</li> <li>• Determine and explain the importance of the waste management hierarchy.</li> <li>• Evaluate on the type and nature of wastes by interpreting the total volumes; and assessing the handling, storage, transportation and disposal methods to be adopted and the potential environmental and health impacts;</li> <li>• Assess the activities involved for the proposed and determine the type, nature and estimated volumes of waste to be generated;</li> <li>• Identify any potential environmental impacts from the generation of waste at the site;</li> <li>• Recommend appropriate waste handling and disposal measures / routings in accordance with the current legislative and administrative requirements, and;</li> <li>• Categorize waste material for disposal considerations.</li> <li>• Describe the importance and factors affecting generation rates of waste.</li> <li>• Determine and compile the essential elements contain in a waste management plan</li> <li>• Classify and compare different methods of environmental education.</li> </ul>
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**MASTER OF PUBLIC HEALTH (M9EN2P)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
African Health System, Health and Environmental Politics and Management	AHSC2P2	100%	0%	9	16	The module explores the impact of existing health systems and associated political environment on continental demographics; water; ecosystems critical for human survival; health; food and energy.	Explain key (emerging) environmental and occupational health challenges at local, regional and global levels. Discuss the impacts of (emerging) environmental and occupational challenges on natural resources such as water, air, energy, plants and wildlife in relation to human health. Investigate the intricate relationships between human health and the environment at local, national, regional and global. Evaluate management strategies for emerging environmental and occupational health challenges. Design and implement management strategies for the emerging environmental and occupational health challenges.
Emerging National and Continental Environmental Health Challenges	ENCC2P1	100%	0%	9	16	The impact of the above challenges on continental demographics; water; ecosystems critical for human survival; health; food & energy; etc. can be described.	Explain key (emerging) environmental and occupational health challenges at local, regional and global levels. Discuss the impacts of (emerging) environmental and occupational challenges on natural resources such as water, air, energy, plants and wildlife in relation to human health. Investigate the intricate relationships between human health and the environment at local, national, regional and global. Evaluate management strategies for emerging environmental and occupational health challenges. Design and implement management strategies

							for the emerging environmental and occupational health challenges.
Environmental Epidemiology, Biostatistics and Research Methodologies A	EEBCAP 1	100%	0%	9	10	The module introduces and demonstrates the relevance of epidemiology, biostatistics and research methodologies to public health. It provides the foundation to public health surveillance and investigations.	Apply scientific methodologies for conducting health risk and impact assessments based on WHO and other acceptable standards. Analyse case studies with relevant scenarios and challenges in a country. Enumerate, understand, mitigate and manage associated risks within the context of a country or region in question.
Environmental Epidemiology, Biostatistics and Research Methodologies B	EEBCBP 1	100%	0%	9	10	The module introduces and demonstrates the relevance of epidemiology, biostatistics and research methodologies to public health. It provides the foundation to public health surveillance and investigations.	The relevance of epidemiology, relevant to environmental health practice can be demonstrated. The interpretation and critique of epidemiological research are applied. The choice of an appropriate study design; collection of data; the control of bias; analysing, confounding and the interpretation of results are applied appropriate to health risks.
Environmental Health Risk and Impact Assessment	EHRC2P 1	100%	0%	9	10	The purpose of the module is to introduce Environmental Health Risk and Impact Assessment in the context of Public Health within a region or country's health system.	Apply scientific methodologies for conducting health risk and impact assessments based on WHO and other acceptable standards. Analyse case studies with relevant scenarios and challenges in a country. Enumerate, understand, mitigate and manage associated risks within the context of a country or region in question.
Health Promotion and Health Behaviour	HPBC2P1	100%	0%	9	10	The purpose of the module is to introduce Health promotion and health behaviour.	Articulate concepts and principles as well as core competences of health promotion. Articulate health promotion theories and models with accepted health promotion values and outcomes. Explain the characteristics of "healthy" public policies. Discuss the roles of advocacy, enablement, mediation, health

							communication and social marketing in health promotion. Explain the concept of sustainability of health programmes. Articulate the health promotion theories, models, strategies and interventions for prevention of various health challenges. Design and evaluate health promotion interventions for various health challenges.
Health Systems, Funding Modules and Health Economics	HSFC2P2	100%	0%	9	16	This module sets the objective of introducing students to theoretical research in public health funding models and will equip them with the basic knowledge needed to interpret and appraise applied studies in health economics.	Evaluate the role of government in addressing failures in health care understand mark the basic concepts of economic evaluation. Evaluate the role of a health economist in planned health systems and markets Demonstrate the understanding of health economics through review of case studies.
Principle and Practice of Environmental Health A	PPECAP 1	100%	0%	9	10	The purpose of the module is to introduce Environmental and Occupational Health in the context of Public Health within a region or country's health system.	Contextualise Public Health within a region and the relevant countries' health systems, with specific focus on Environmental Health.
Principle and Practice of Environmental Health B	PPECBP 1	100%	0%	9	10	This module evaluates and debates occupational and environmental health programs/systems with reference to strengths, weaknesses, core values, ethos of current health reforms and global public health priorities.	Evaluate and debate occupational and environmental health programmes/systems with reference to strengths, weaknesses, core values, ethos of current health reforms and global public health priorities.
Minor Dissertation A	EMDCAP 2	100%	0%	9	2	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Research Topic Formulation; Introduction and Background to the Study; Purpose, Significance and Justification of the Study. Develop the concept note for the studies.
Minor Dissertation B	EMDCBP 2	100%	0%	9	2	The purpose of the module is to	Research Questions; Objectives; Hypothesis

						introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Formulation; Literature Search Strategy; Literature Review; Theoretical and Conceptual Frameworks.
Minor Dissertation C	EMDCCP 2	100%	0%	9	2	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Research Design; Study Site; Study Population; Sample Size Determination; Sampling.
Minor Dissertation D	EMDCDP 2	100%	0%	9	2	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Data Collection Methods; Creation of Data Collection Tools; Validity and Reliability; Data Analysis Plans.
Minor Dissertation E	EMDCEP 2	100%	0%	9	2	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Research Timelines and Budget; Application for Research, Information and Ethics Clearance Forms; Research Proposal Submission to the Departmental Research Committee (DRC) for Review and Approval.
Minor Dissertation F	EMDCFP 2	100%	0%	9	2	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Research Proposal Submission to the Faculty Higher Degrees Committee (FHDC) for Review and Approval, and then to the Research Ethics Committee (REC) for Ethics Review and Approval; Drafting of Chapters 1 to 3 of Minor Dissertation.
Minor Dissertation G	EMDCGP 2	100%	0%	9	16	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Pilot Study; Data Collection and Entry for the main study.
Minor Dissertation H	EMDCHP 2	100%	0%	9	16	The purpose of the module is to introduce research methods and methodology with specific focus on Environmental and Occupational Health.	Data Cleaning; Data Analysis; Drafting of Chapters 4 and 5 of Minor Dissertation; Drafting of the Minor Dissertation.
Minor Dissertation I	EMDCIP2	100%	0%	9	16	The purpose of the module is to introduce research methods and methodology with	Dissertation Finalisation with Supervisors; Dissertation Editing with an Editor; Submission of Dissertation for TurnItIn

						specific focus on Environmental and Occupational Health.	Plagiarism Report; Completion of Examination Forms; Minor Dissertation Examination; and Research Output Generation (Publication Article).
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## HS12.6 DEPARTMENT OF MEDICAL IMAGING AND RADIATION SCIENCES (MIRS)

**BACHELOR OF DIAGNOSTIC RADIOGRAPHY (B9M01Q)**

**BACHELOR OF DIAGNOSTIC ULTRASOUND (B9M03Q)**

**BACHELOR OF NUCLEAR MEDICINE (B9M02Q)**

**BACHELOR OF EADIATION THERAPY (B9M04Q)**

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Anatomy and Physiology 1	ANP01Y1	100%	0%	5	12	The module will enable students to gain the relevant anatomy and physiological background applicable to MIRS in the following topics: Terminology, Basic Chemistry, The Cell, Basic Histology, Skeletal system, Osseous Tissue, Female Reproductive system, Endocrine system, Nervous system, Special senses, Cardiovascular system, Respiratory system, and Digestive system.	On completion of this module a student should be able to:  1. Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Biological concepts.  2. Work effectively with others as a member of a team, group, organisation or community by means of project presentations.  3. Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.  4. Collect, analyse, organise and critically evaluate information by means of preparation of the project.  5. Communicate effectively using visual, mathematical and/or language skills

						<p>in the modes of an oral and written project presentation.</p> <p>6. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Anatomy and Physiology 2	ANP01Y2	100%	0%	5	12	<p>The module will enable students to gain the relevant anatomy and physiological background applicable to MIRS in the following topics: Integumentary system, Lymphatic and Immune systems, Support and movement (musculoskeletal system), Male Reproductive system, Urinary system</p> <p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Biological concepts.</li> <li>2. Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</li> <li>3. Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</li> <li>4. Collect, analyse, organise and critically evaluate information by means of preparation of the project.</li> <li>5. Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</li> </ol>



							6. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological/Biological concepts.
Applied Physics	APP01Y1	50%	50%	5	12	<b>Science module</b>  The purpose of this module is to provide a factual knowledge of definitions, methods and principles in Physics, and provide a broad background knowledge of basic Physics to aid in the understanding and interpretation of future scientific and technological development and to acquire the following life skills such as identifying and solving problems, working in groups and communicating effectively as is needed for the various disciplines in Radiography.	On completion of this module a student should be able to:  1. Describe Bohr's atomic model and its application in explaining the spectra of atoms.  2. State basic laws of electrostatics and current electricity and solve basic problems relating to electric circuits.  3. Describe the basic concepts that govern the magnetic effect of an electric current and perform calculations relating to these topics.  4. Define the physical quantities and concepts related to sound waves and geometrical optics as well as their uses in medicine.  5. Define the physical quantities and state the laws related to heat and gases and solve problems related to heat.
Applied Psychology	APY01Y3	100%	0%	7	12	The purpose of this module is to provide the student with knowledge of the overall and specific goals typical of communication in health practice; the importance of non-verbal elements of interactions, listening and awareness of various environments affecting health care.	On completion of this module a student should be able to:  1. Recognize the significance of effective interpersonal communication in the health professional.  2. Achieve effective communication by

						Additionally, the realities of specific aspects of communication such as conflict, cultural variations, misunderstandings and ethical issues will be explored.	developing awareness within the health profession  3. Manage the realities of communication (conflicts, ethical issues and cultural variations) as a health professional
Diagnostic Clinical Practice 1	DCP01Y1	100%	0%	6	24	The primary purpose of this module is to progress on the knowledge, skills and experience that the student had obtained in first year. A student who passes this module will be able to function efficiently and responsibly, under supervision, within the health care team to produce quality radiographic images, assist with radiographic procedures and care for patients consistent with this level of training and education. The term care will be approached in a holistic fashion with the incorporation of bioethics, patient rights, human rights, the UJ-student charter and social determinants of health.	On completion of this module a student should be able to:  1. Perform routine and supplementary radiographic procedures to produce images of diagnostic quality pertaining to anatomical areas included in the 1st year syllabus.  2. Evaluate the quality of routine and supplementary radiographic images and perform image interpretation to identify normal and abnormal appearances.  3. Perform safe and effective patient care in accordance with the patient's needs and departmental protocol to provide a quality service and to maintain the welfare of the patient.  4. Apply the principles of human rights, ethics and relevant medical law which ensure the well-being of the patient.  5. Apply the social determinants of health to promote patient centred care.
Diagnostic Clinical Practice 2	DCP01Y2	100%	0%	7	30	The primary purpose of this module is to progress on the knowledge, skills and experience that the student had obtained in	On completion of this module a student should be able to:  1. Communicate effectively with members of a

						<p>first year. A student who passes this module will be able to function efficiently and responsibly, under supervision, within the health care team to produce quality radiographic images, assist with radiographic procedures and care for patients consistent with this level of training and education. The term care will be approached in a holistic fashion with the incorporation of bioethics, patient rights, human rights, the UJ-student charter and social determinants of health.</p>	<p>multidisciplinary team and the patient and their family members.</p> <p>2. Optimal patient care is demonstrated before, during and after imaging process.</p> <p>3. Radiographic images are evaluated in a theoretical context for diagnostic quality according to relevant evaluation criteria and to ensure that the images conform to the medico-legal requirements.</p> <p>4. Images are evaluated for normal and abnormal radiographic appearances by applying integrated knowledge of anatomy, physiology and pathology in a theoretical and/or simulation context.</p> <p>5. A patient's clinical condition is assessed, and appropriate action taken when needed.</p>
Diagnostic Clinical Practice 3	DCP01Y3	100%	0%	7	24	<p>The purpose of this module is to develop and build on the clinical competencies learnt in Diagnostic Clinical Practice 2 and required in a Diagnostic Radiographer in the Radiology Department.</p>	<p>On completion of this module a student should be able to:</p> <p>1. Discuss and demonstrate appropriate patient care for the procedures.</p> <p>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members.</p> <p>3. Write a reflective report.</p> <p>4. Discuss the attributes required in a professional diagnostic radiographer.</p>

							5. Demonstrate clinical competency for the procedures presented in this module, Diagnostic Practice 3 and Specialised Diagnostic Practice 3.
Diagnostic Clinical Practice 4	DCP01Y4	100%	0%	8	24	The purpose of this module is to develop and build on the clinical competencies learnt in Diagnostic Clinical Practice 3 and required in a Diagnostic Radiographer in the Radiology Department	<p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Discuss and demonstrate appropriate patient care for the procedures.</li> <li>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members.</li> <li>3. Write a reflective report.</li> <li>4. Discuss the attributes required in a professional diagnostic radiographer.</li> <li>5. Demonstrate clinical competency for the procedures presented in this module, Diagnostic Practice 4 and Specialised Diagnostic Practice 4</li> </ol>
Diagnostic Practice 1	DIP01Y1	100%	0%	6	24	The primary purpose of this module is to equip the student with basic theoretical knowledge and clinical skills pertaining to diagnostic radiographic practice and to allow the student to undertake radiographic procedures under supervision, within the healthcare team. The student will be able to produce quality radiographic images and provide care for the patient consistent with this level of training and education. The term care will be approached	<p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Perform routine and supplementary radiographic procedures to produce images of diagnostic quality pertaining to anatomical areas included in the 1st year syllabus- Basic radiographic terminology, Chest, Abdomen, Upper limb, Shoulder girdle and Lower limb</li> <li>2. Evaluate the quality of routine and</li> </ol>

						<p>in a holistic fashion with the incorporation of bioethics, patient rights, human rights, the UJ-student charter and a basic understanding of the social determinants of health.</p>	<p>supplementary radiographic images and perform image interpretation to identify normal and abnormal appearances.</p> <p>3. Perform safe and effective patient care in accordance with the patient's needs and departmental protocol to provide a quality service and to maintain the welfare of the patient.</p> <p>4. Apply the principles of human rights, ethics and relevant medical law which ensure the well-being of the patient.</p> <p>5. Apply the social determinants of health to promote patient centred care.</p>
Diagnostic Practice 2	DIP01Y2	100%	0%	6	30	<p>The primary purpose of this module is to progress on the knowledge, skills and experience that the student had obtained in first year. A student who passes this module will be able to function efficiently and responsibly, under supervision, within the health care team to produce quality radiographic images, assist with radiographic procedures and care for patients consistent with this level of training and education. The term care will be approached in a holistic fashion with the incorporation of bioethics, patient rights, human rights, the UJ-student charter and social determinants of health.</p>	<p>On completion of this module a student should be able to:</p> <p>1. Perform routine and supplementary radiographic procedures to produce images of diagnostic quality pertaining to anatomical areas included in the 2nd year syllabus - Pelvis and upper femur; chest pathology; bony thorax; Spine; Skull and facial bones.</p> <p>2. Evaluate the quality of routine and supplementary radiographic images and perform image interpretation to identify normal and abnormal appearances.</p> <p>3. Perform safe and effective patient care in accordance with the patient's needs</p>

							<p>and departmental protocol to provide a quality service and to maintain the welfare of the patient.</p> <p>4. Apply the principles of human rights, ethics and relevant medical law which ensure the well-being of the patient.</p> <p>5. Apply the social determinants of health to promote patient centred care.</p>
Diagnostic Practice 3	DIP01Y3	100%	0%	7	24	<p>The primary purpose of this module is to build on knowledge, experience and skills gained from Diagnostic Practice and Diagnostic Clinical Practice 1 and 2. This module enables you to function efficiently and responsibly, under supervision, within the health care team to produce diagnostic radiographs of consistently good quality.</p>	<p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain and discuss the radiographic procedures included in this module - Facial bones, dental radiography, orthopantomography, contrast media, urinary, female reproductive and alimentary system</li> <li>2. Apply, integrate and analyse theory to/into clinical setting to ensure diagnostic radiographic images are produced in accordance with image evaluation criteria</li> <li>3. Apply a holistic approach that considers radiation science principles, anatomy, physiology and pathology to ensure adherence to the ALARA principle and justification and limiting of ionising radiation.</li> <li>4. Apply knowledge of radiographic anatomy and pathology to assess radiographic images in terms of pattern recognition to</li> </ol>

							<p>distinguish between normal and abnormal appearances.</p> <p>5. Explain and discuss contrast media used in radiographic procedures in terms of use, indications, contraindications and medicolegal implications</p> <p>6. Explain, discuss and apply emergency protocols in the advent of adverse reactions</p> <p>7. Apply bioethical and human rights principles to ensure patient care, effective teamwork and professionalism.</p>
Diagnostic Practice 4	DIP01Y4	100%	0%	8	24	<p>The purpose of this module is to build on the learning in Diagnostic Imaging Practice 1, 2 &amp; 3 and Diagnostic Clinical Practice 1,2 &amp; 3. The examinations and procedures learnt in this module will enable you to function optimally in the clinical practice to produce quality imaging with a patient centred approach. The role of the diagnostic radiographer in interprofessional situations will be taught within this module to enable collaboration in the South African healthcare environment.</p>	<p>On completion of this module a student should be able to:</p> <p>1. Explain and discuss the radiographic procedures included in this module.</p> <p>2. Apply, integrate and analyse theory to/into clinical setting to ensure diagnostic radiographic images are produced in accordance with image evaluation criteria</p> <p>3. Apply a holistic approach that is patient centred and considers radiation science principles, anatomy, physiology and pathology to ensure adherence to the ALARA principle and justification of an examination and limiting of ionising radiation.</p> <p>4. Apply knowledge of radiographic anatomy and pathology to assess radiographic images</p>

						<p>in terms of pattern recognition to distinguish between normal and abnormal appearances.</p> <p>5. Explain and discuss contrast media used in radiographic procedures in terms of use, indications, contraindications and medico-legal implications</p> <p>6. Apply bioethical and human rights principles to ensure patient care, effective teamwork, interprofessional collaboration and professionalism.</p>
Education in Health	EIH01Y4	100%	0%	8	24	<p>The purpose of this module is to develop theoretical knowledge and competencies for clinical educators within the medical imaging and radiation science's context of work-integrated learning.</p> <p>On completion of this module a student should be able to:</p> <p>1. Articulate the value, benefits and challenges of WIL in the higher educational context of medical imaging and radiation sciences program.</p> <p>2. Compose a sound work placement program for WIL incorporating all related resources.</p> <p>3. Design concrete examples of how Kolb's experiential learning theory would be applied in the context of your workplace to inform the design of work related learning outcomes, lesson plans and assessments.</p> <p>4. Contextualize the strategies for an effective WIL program to your practice and explain how each would be implemented.</p>



							5. Evaluate the role of simulation in health sciences education.
Imaging Informatics	IMT01Y4	100%	0%	8	24	The purpose of this module is to enable the student to function in the radiology environment in the use of PACS, RIS and HIS. Under supervision use PACS, RIS and HIS with regard to the POPI Act and bioethical principles	<p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Demonstrate an understanding of the role of IT in the radiology environment.</li> <li>2. Explain the role of PACS, RIS &amp; HIS within the Healthcare sector.</li> <li>3. Discuss the ethical principles for PACS, RIS and HIS and the POPI Act.</li> <li>4. This module requires you to fully engage with the PACS Administrators and IT personnel to apply your knowledge of PACS, RIS and HIS in clinical practice.</li> </ol>
Imaging Technology 1	IMT01Y1	100%	0%	5	12	The purpose of this module is to introduce you to the basic concepts and principles of imaging technology used in radiographic imaging. After completion of the study units, you will have both practical and theoretical knowledge of how radiographic images are formed and recorded.	<p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Describe radiation and its discovery.</li> <li>2. Define the principles of radiographic image formation in order to adjust the correct factors in obtaining a diagnostic x-ray image.</li> </ol>
Imaging Technology 1	IMT02Y1	100%	0%	5	12	The purpose of this module is to introduce the student to the physical principles of diagnostic ultrasound, and its interactions with human tissue, which allow its use as a valuable diagnostic imaging modality. The mastering of these principles, combined	<p>On completion of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Analyze the principles of ultrasound physics, which will allow application in the clinical context.</li> <li>2. Demonstrate the principal components</li> </ol>

						with the knowledge of ultrasound equipment, will develop a student who can operate the equipment competently and safely in the production of high quality diagnostic images. This module will form a basis for application in the clinical context.	<p>of medical ultrasound units.</p> <p>3. Link the scientific knowledge of physics principles to the equipment for the production of quality ultrasound images.</p> <p>4. Assess the sonographic image for technical quality and determine any necessary improvements.</p> <p>5. Relate the known bio-effects of ultrasound in human tissue to potential bio-hazards.</p>
Imaging Technology 2	IMT01Y2	100%	0%	6	24	The purpose of this module is to build on the knowledge gained from imaging technology 1, and to introduce you to the more advanced concepts and principles of radiographic imaging. It gives you a basic understanding of digital imaging and its components, application of exposure techniques and image evaluation, principles of fluoroscopy, computered tomography (CT) and magnetic resonance imaging (MRI).	<p>On completion of this module a student should be able to:</p> <p>1. Acquire knowledge and understanding of Computed Radiography (CR) and Digital Imaging systems and apply principles of digital image formation, latent image processing and adequate image post-processing.</p> <p>2. Apply the principles of radiographic image formation for static and dynamic imagings in order to adjust the correct factors. Analyse the diagnostic x-ray image and the impact of the delivered dose to the patient.</p>
Management Principles and Practice	MPP01Y3	50%	50%	7	24	<p><b>CBE module</b></p> <p>The purpose of this module is to introduce the student to the main themes and concepts of Business Management. The lectures, discussions and prescribed reading are designed to enable the students to understand and analyse these</p>	<p>On completion of this module a student should be able to:</p> <p>1. Describe and explain the business environment</p> <p>2. Understand the principles of planning and strategy formulation</p>

						concepts in a practical manner.	<p>3. Analyse and understand ethics and corporate social responsibility</p> <p>4. Apply planning and decision-making aids</p> <p>5. Describe and understand the human resource (HR) management function in the organisation</p>
Nuclear Medicine Clinical Practice 1	NCP01Y1	100%	0%	6	24	The purpose of this module is to enable the student to disseminate good imaging practice. This is achieved by effectively practicing patient care and management, data acquisition of the prescribe organs including basic data manipulations and general hot laboratory management and elution of a generator.	<p>At the end of this module the student should be able to do the following:</p> <p>1. Discuss and demonstrate appropriate patient care for the procedures prescribed for this module.</p> <p>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members.</p> <p>3. Demonstrate clinical competency for the procedures presented in this module.</p>
Nuclear Medicine Clinical Practice 2	NCP01Y2	100%	0%	7	30	The purpose of this module is for the student to disseminate good imaging practice. This is achieved by effectively practicing patient care and management, data acquisition of the prescribe organs including data manipulations where applicable and general hot laboratory management and preparation of radionuclides in house.	<p>At the end of this module, the student should be able to:</p> <p>1. Apply effective patient care and management before, during and after nuclear medicine investigative studies and treatments</p> <p>2. Perform effectively all the prescribed imaging procedures and associated requirements to effectively produce diagnostic results for the management of patients referred to Nuclear Medicine</p>

							<p>3. Function effectively in the nuclear medicine laboratories.</p> <p>You will be assessed as competent if you can demonstrate that:</p> <ul style="list-style-type: none"> <li>- Proper protocols and procedures are executed for patient preparation and care</li> <li>- Patient administration before, during and after are properly managed for the wellbeing and further management of the patient</li> <li>- Good communication with complementary departments, as well as within the department, is maintained for the smooth running of the department</li> <li>- Appropriate acquisition protocols, patient position, procedures and final information presentations are selected and produced for optimum results in the management of patients and image</li> </ul> <p>4. Operate and perform quality control programmes in Nuclear Medicine department for optimum function.</p>
Nuclear Medicine Clinical Practice 3	NCP01Y3	100%	0%	7	24	The purpose of this module is for you to disseminate good imaging practice. This is achieved by effectively practicing patient care and management, data acquisition and reconstruction of the prescribe organs and general radiopharmacy management,	<p>At the end of this module, the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Discuss and demonstrate appropriate patient care for the procedures prescribed for this module.</li> <li>2. Communicate effectively with</li> </ol>

						compounding radiopharmaceuticals and dispensing.	<p>members of a multidisciplinary team and the patient and their family members.</p> <p>3. Write a reflective report</p> <p>4. Discuss the attributes required in a professional nuclear medicine radiographer.</p> <p>5. Demonstrate clinical competency for the procedures presented in this module.</p>
Nuclear Medicine Clinical Practice 4	NCP01Y4	100%	0%	8	24	The purpose of this module is to advocate good imaging practice in the Nuclear Medicine Department and PET-CT facility. This is achieved by effectively practicing good patient care and management, specialized and PET-CT data acquisition and reconstructions, PET-CT hot laboratory management and radiopharmaceutical dispensing, acquisition protocols, procedure documentation and management.	<p>At the end of this module you should be able to:</p> <ol style="list-style-type: none"> <li>1. Manage and practice good patient care holistically before, during and after Nuclear Medicine procedures.</li> <li>2. Apply all prescribed quality assurance measures in the department.</li> <li>3. Dispense all radiopharmaceuticals used in the PET-CT facility with emphasis on aseptic technique and safety precautions for handling of radioactive substances used for imaging.</li> <li>4. Carry out imaging techniques as set out in this module.</li> <li>5. Perform data manipulations associated with specialized imaging practice and PET-CT.</li> <li>6. Manage and administrate the Nuclear Medicine department to ensure a quality Nuclear Medicine service.</li> </ol>

Nuclear Medicine Instrumentation	NMI01Y2	100%	0%	6	12	The purpose of this module is to provide you with a basic understanding of the origin of radioactivity, the design and function of Nuclear Medicine Instrumentation.	At the end of this module you should be able to:  1. Apply knowledge and understanding of radiation physics and radiobiology as applied in Nuclear Medicine.  2. Utilize correct imaging instrumentation and accessories, (the gamma camera with specialised functions such as SPECT), nonimaging instrumentation, (scintillation probe, well counters, survey meters) and image processing instrumentation, in a range of nuclear medicine investigations and applications.  3. Perform and assure quality control programmes in Nuclear Medicine Instrumentation.  4. Apply the elementary principles of computer operation as applied to the acquisition, display and processing of Nuclear Medicine Images.  5. Apply basic principles of in-vitro counting of samples.
Nuclear Medicine Practice 1	NMP01Y1	100%	0%	6	24	The purpose of this module is to provide you with the theoretical knowledge and skills in Nuclear Medicine in the prescribed organ imaging procedures for this module in order to effectively and efficiently produce images of diagnostic quality.	At the end of this module you should be able to:  1. Apply the basic principles of nuclear medicine imaging in order to produce images of diagnostic quality.  2. Apply knowledge of disease state and processes to the

							<p>imaging protocols and procedures.</p> <p>3. Maintain appropriate patient management before, during and after procedures.</p> <p>4. Utilize correct imaging instrumentation and accessories for the prescribed nuclear medicine investigations and applications</p> <p>5. Apply the elementary principles of computer operation as applied to the acquisition, display and processing of basic Nuclear Medicine images.</p>
Nuclear Medicine Practice 2	NMP01Y2	100%	0%	6	30	<p>The purpose of this module is to provide the student with the theoretical knowledge and skills to function holistically in the prescribed nuclear medicine organ imaging in order effectively and efficiently produce images of optimum quality.</p>	<p>On completion of this module the student should be able to:</p> <p>1. Perform specified Nuclear Medicine procedures and techniques appropriate to the clinical presentation in order to produce images of diagnostic Quality.</p> <p>2. Apply knowledge of disease state and processes to the imaging protocols and procedures.</p> <p>3. Apply appropriate injection procedures.</p> <p>4. Maintain appropriate patient management before, during and after procedures</p>
Nuclear Medicine Practice 3	NMP01Y3	100%	0%	7	24	<p>The purpose of this module is to provide you with the opportunity to acquire knowledge, skills and experience to function effectively, under supervision, within the health care</p>	<p>On completion of this module the student should be able to:</p> <p>1. Perform specified Nuclear Medicine procedures and techniques</p>

						<p>team to produce quality radiographic images, assist with radiographic procedures and care for patients consistent with this level of training and education.</p>	<p>appropriate to the clinical presentation in order to produce images of diagnostic quality.</p> <p>2. Apply knowledge of disease state and processes to the imaging protocols and procedures.</p> <p>3. Perform safe and effective patient care in accordance with the patient's needs and departmental protocol to provide a quality service and to maintain the welfare of the patient.</p> <p>4. Utilize correct imaging instrumentation and accessories for the prescribed Nuclear Medicine investigations and applications.</p> <p>5. Apply appropriate injection procedures.</p> <p>6. Apply the elementary principles of computer operation as applied to the acquisition, display and processing of basic Nuclear Medicine images.</p>
Nuclear Medicine Practice 4	NMP01Y4	100%	0%	8	24	<p>The primary purpose of this module is to provide the student with further understanding in the application and assessment of existing knowledge, specialized and hybrid imaging technologies coupled with scientific applications and professional growth in practicing Nuclear Medicine.</p>	<p>On completion of this module the student should be able to:</p> <p>1. Demonstrate the principles of infection detection in nuclear medicine imaging.</p> <p>2. Apply scientific skills and technologies to the clinical presentation for the production of optimum image quality in the specialized learning content.</p> <p>3. Demonstrate an understanding of the</p>



							<p>application of radionuclides and management of pediatric patient.</p> <p>4. Demonstrate an understanding of the Nuclear Medicine discipline in the South Africa context as a way of managing a nuclear medicine facility.</p>
Pathology	PTY01Y1	100%	0%	5	12	<p>The purpose of the module is to make students conversant with basic medical terminology related to pathological conditions. It introduces the student to the foundational principles of pathological processes which will underpin the knowledge of the specific systems pathology which will be integrated into the subsequent years of study.</p>	<p>On completion of this module the student should be able to:</p> <p>1. Define common terminology associated with the study of disease in order to describe pathological processes.</p> <p>2. Integrate knowledge of the fundamental principles of pathology with diseases of the body systems to ensure a full comprehension of the effects of disease on the human body.</p>
Professional Practice	PRP01Y1	100%	0%	5	24	<p>The purpose of this module is to:</p> <p>1. To introduce the learner to the knowledge and skills required to become a professional member of the health care team.</p> <p>2. To provide you with insight, knowledge and skills regarding your role as a member of the medical profession in terms of patient care, first aid procedures, ethical responsibilities and the ability to communicate with different types of patients in the medical imaging department.</p> <p>3. The knowledge and skills learnt in this</p>	<p>On completion of this module the student should be able to:</p> <p>1. Apply the principles of professional practice and medical ethics which will protect the rights and well-being of the patient.</p> <p>2. Apply the principles of reflective practice in a manner that will ensure holistic growth as a health care professional</p> <p>3. Explain the basic principles of Human Rights and identify the importance of professional conduct, ethical and legal</p>

						<p>module will further be developed in the 2nd year of your studies.</p>	<p>responsibilities in order to function as a professional member of the healthcare team.</p> <p>4. Demonstrate a basic knowledge of the health and safety regulations to ensure patient, public and staff are protected from unnecessary radiation</p> <p>5. Assess the patient's needs and condition correctly with regard to patient care to ensure the welfare of the patient is maintained without discrimination or contravention of their rights.</p> <p>6. Demonstrate the methods of preventing cross infection while performing radiographic examinations and procedures in order to provide a quality service.</p> <p>7. Explain and discuss the general and specific procedures related to drugs used in X-ray Department to provide a quality examination</p> <p>8. Identify the possible emergencies which may occur in the x-ray department and to be prepared for such an event.</p> <p>9. Explain and discuss the correct components required for effective written communication</p> <p>10. Demonstrate knowledge of various methods of communication which are required for</p>
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							communication in the workplace.
Professional Practice and Research Principles	PRR01Y2	100%	0%	6	24	<p>The purpose of this module is:</p> <ul style="list-style-type: none"> <li>· To build on your knowledge and skills to enable you to become a professional member of the multidisciplinary health care team.</li> <li>· To enhance your communication skills, enable you to reflect on your practice and understand the ethical responsibilities in your role as a health professional.</li> <li>· To introduce research principles that are required for a professional practitioner.</li> </ul>	<p>On completion of this module the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Apply the principles of reflective practice in a manner that will, ensure holistic growth as a health care professional</li> <li>2. Demonstrate an understanding of the principles of Human Rights and identify the importance of professional conduct, ethical and legal responsibilities in order to function as a professional member of the healthcare team.</li> <li>3. Assess the patient's needs and condition correctly with regard to patient care to ensure the welfare of the patient is maintained without discrimination or contravention of their rights.</li> <li>4. Explain and discuss the research principles required for a health professional.</li> </ol>
Radiation Therapy Clinical 1	RTC01Y1	100%	0%	6	24	<p>The purpose of this module is to develop the clinical competencies required in a Therapy Radiographer at a first-year level.</p>	<p>On completion of this module the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Discuss and demonstrate appropriate patient care for the procedures presented in learning unit 5</li> <li>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members.</li> <li>3. Write a reflective</li> </ol>

							<p>report.</p> <p>4. Discuss the attributes required in a professional radiotherapist.</p> <p>5. Demonstrate clinical competency for the procedures presented in this module.</p>
Radiation Therapy Clinical 2	RTC01Y2	100%	0%	7	30	<p>The purpose of this module is to develop a student, competent in the knowledge and skills required for the management of neoplasms covered in this module.</p>	<p>On completion of this module the student should be able to:</p> <p>1. Discuss and demonstrate appropriate patient care for the procedures presented in RTP01Y2</p> <p>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members</p> <p>3. Write a reflective report on patient care provided on any system discussed in RTP01Y2</p> <p>4. Discuss the attributes required in a professional radiotherapist by completing specific tasks for this level</p> <p>5. Demonstrate clinical competency for the procedures presented in this module.</p>
Radiation Therapy Clinical 3	RTC01Y3	100%	0%	7	24	<p>The purpose of this module is to enable the student to apply the theory of Radiation Therapy Practice 3 and includes professional practice within the clinical environment.</p>	<p>At the end of this module, the student should be able to:</p> <p>1. Discuss &amp; demonstrate appropriate patient care for the procedures presented in learning unit 5.</p>

							<p>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members.</p> <p>3. Write a reflective report.</p> <p>4. Discuss the attributes required in a professional radiotherapist.</p> <p>5. Demonstrate clinical competency for the procedures presented in Radiation Therapy Practice 3 module.</p>
Radiation Therapy Clinical 4	RTC01Y4	100%	0%	8	24	The purpose of this module is to build on the previous year's modules in clinical competencies by applying the theory of Radiation Therapy Practice 4 and includes professional practice within the clinical environment.	<p>At the end of this module the student should be able to:</p> <p>1. Discuss and demonstrate appropriate patient care for the procedures presented in learning unit 5.</p> <p>2. Communicate effectively with members of a multidisciplinary team and the patient and their family members.</p> <p>3. Write a reflective report.</p> <p>4. Discuss the attributes required in a professional radiotherapist.</p> <p>5. Demonstrate clinical competency for the procedures presented in this module.</p>
Radiation Therapy Practice 1	RTP01Y1	100%	0%	6	24	The primary purpose of this module is to introduce you to radiation oncology so that you can understand the principles guiding the management of an oncology patient and	<p>At the end of this module a student should be able to:</p> <p>1. Have the knowledge and skill to deliver a simple radiotherapy</p>

						the equipment used in radiotherapy treatment.	<p>treatment under supervision</p> <p>2. Be aware of the side effects of treatment</p> <p>3. Be able to manage side effects appropriately</p> <p>4. Be able to perform simple quality assurance checks prior to treatment delivery</p>
Radiation Therapy Practice 2	RTP01Y2	100%	0%	7	30	The purpose of this module is to develop a student, competent in the knowledge and skills required for the management of neoplasms covered in this module.	<p>After completion of this module, the student should be able to:</p> <p>1. Select and apply the appropriate radiotherapy technique for each neoplasm in order to accurately treat a patient</p> <p>2. Critique radiotherapy treatment plans appropriate to each neoplasm in order to select an appropriate plan for treatment and discuss the implementation of the plan into the clinical setting.</p> <p>3. Predict and manage radiotherapy side effects, for each neoplasm discussed, responsibly, ethically and effectively.</p>
Radiation Therapy Practice 3	RTP01Y3	100%	0%	7	24	The purpose of this module is to interpret and apply anatomical, pathological and clinical data in order to apply and analyze complex treatment plans and manage the radiotherapy side effects thereof.	<p>After completion of this module, the student should be able to:</p> <p>1. Interpret and apply anatomical, pathological and clinical data in order to accurately discuss the oncological management of each neoplasm.</p> <p>2. Select and apply the appropriate</p>

							<p>radiotherapy technique for each neoplasm in order to accurately treat a patient</p> <p>3. Critique radiotherapy treatment plans appropriate to each neoplasm in order to select an appropriate plan for treatment and discuss the implementation of the plan into the clinical setting.</p> <p>4. Predict and manage radiotherapy side effects, for each neoplasm discussed, responsibly, ethically and effectively.</p>
Radiation Therapy Practice 4	RTP01Y4	100%	0%	8	24	<p>The purpose of this module is to provide the student with:</p> <ul style="list-style-type: none"><li>Detailed knowledge of advanced radiotherapy treatment planning and specialized techniques in a way that encourages critical and independent thinking in order to adapt to changes in the dynamic field of radiation oncology and participate in the development and review of radiotherapy protocols.</li><li>The knowledge, interpretation, practical skills in the environment of business, culture, ethics and diversity in the workplace.</li></ul>	<p>At the end of this module the student should be able to:</p> <ol style="list-style-type: none"><li>Evaluate the merits of complex radiotherapy protocols in order to adapt to changes in the field of radiation oncology and participate in the development and review of radiotherapy protocols</li><li>Integrate knowledge from practical demonstrations with theory in order to precisely describe specialized treatment planning procedures</li><li>Apply pathological, radiobiological and radiation physics knowledge to provide an optimal brachytherapy service to radiotherapy patients</li><li>Demonstrate and apply a sound knowledge of the theoretical principles of decision-making</li></ol>

							<p>and aids for decision-making.</p> <p>5. Demonstrate and apply sound knowledge of the theoretical principles of leadership, change and innovation.</p> <p>6. Demonstrate a sound knowledge of the theoretical principles of culture, ethics and workforce diversity</p>
Radiographic Department Management Strategies	RGM01Y4	100%	0%	8	12	<p>The purpose of this module is to prepare you for the workplace by introducing you to the specific management principles applicable to a clinical department which will enable you to manage resources in such a way as to provide and maintain a quality, professional service to patients. This module enables you to competently analyse, integrate and apply scientific, theoretical and clinical knowledge to work independently and in a supervisory capacity.</p>	<p>At the end of this module a student should be able to:</p> <ol style="list-style-type: none"> <li>1. Apply health and safety regulations, human rights, medical law and ethics in managing the radiography department to ensure patient , personnel and public safety</li> <li>2. Define the management process, identify and describe the managerial hierarchy and associated functions.</li> <li>3. Demonstrate administrative skills, in line with prescribed protocols and procedures, to ensure that a quality radiographic service is rendered.</li> <li>4. Describe leadership styles, sources of power and how to motivate staff and impact on staff motivation and retention.</li> <li>5. Identify and devise quality assurance measures, which serve as feedback mechanisms, to ensure the smooth running of the department and the</li> </ol>



							rendering of a quality service.
Radiopharmacy 1	RPY01Y1	100%	0%	5	12	The purpose of this module is to provide you with the opportunity to acquire knowledge and skills to function effectively in a radiopharmacy in the areas covered in the prescribed content for this module.	At the end of this module a student should be able to:  1. Apply the knowledge of production of radionuclides and their properties.  2. Assemble, operate and maintain the Molybdenum generator.  3. Explain the design, organization and administration of radionuclides in the radiopharmacy  4. Apply knowledge of radiation protection in the Nuclear Medicine Department
Radiopharmacy 2	RPY01Y2	100%	0%	6	12	The purpose of this module is to provide the student with the opportunity to acquire knowledge and skills to function effectively in the use and application of radionuclides.	At the end of this module a student should be able to:  1. Apply the knowledge of the production of radionuclides and radiochemical make-up of the prescribed radiopharmaceuticals  2. Explain the application of the prescribed radiopharmaceuticals used in clinical imaging.  3. Apply knowledge of radiation effects and risk estimates which may induce radiation malignancies.
Radiopharmacy 3	RPY01Y3	100%	0%	7	12	The purpose of this module is to provide you with the opportunity to acquire knowledge and skills to function effectively in the use and application of radionuclides used in the diagnosis and	At the end of this module a student should be able to:  1. Apply the knowledge of the production of radionuclides and radiochemical make-

						<p>treatment of disease which are prescribed in this learning guide.</p>	<p>up of the prescribed radiopharmaceuticals .</p> <p>2. Explain the application of the prescribed radiopharmaceuticals used in clinical imaging.</p> <p>3. Apply knowledge of radiation effects and risk estimates which may induce radiation malignancies.</p>
Radiopharmacy 4	RPY01Y4	100%	0%	8	12	<p>The purpose of this module is to provide the student with the opportunity to acquire knowledge and skills in specialized and new developments in radiopharmacy. This is achieved by the determination of single photon emission radionuclides, radionuclides for positron emission tomography, interventional nuclear medicine and clinical trials in nuclear medicine.</p>	<p>At the end of this module the student should be able to:</p> <p>1. Understand various radionuclide production methods. Know which radionuclides/radiopharmaceuticals are appropriate for use in SPECT and PET imaging; nuclear medicine therapy; monoclonal and receptor applications.</p> <p>2. Apply knowledge of interventional nuclear medicine.</p> <p>3. Apply the principles and practices of clinical trials in Nuclear Medicine.</p>
Research Methods	REM01Y3	100%	0%	7	24	<p>The purpose of this module is to help the student learn to employ independent research and self-study strategies to develop problem solving, critical thinking and evaluation skills with respect to a real-world problem in the educational environment or clinical practice. It is envisioned that the knowledge and skills gained will aid foster a positive perception of research among students and highlight the importance of collaborative research</p>	<p>At the end of this module, the student should be able to:</p> <p>1. Accurately conceptualize a research topic, question(s) and aim(s) according to acceptable research norms and principles.</p> <p>2. Review, critique and summarize the literature.</p> <p>3. Design an execution plan for the research development with clearly stated</p>

						and the relevance of empirical evidence to guide professional practice.	objectives, timelines and costing.  4. Develop a research proposal in line with the Faculty Guidelines as the framework for your research project in the succeeding year-year 4.  5. Apply basic principles in research to demonstrate your understanding of the certain concepts and how they translate in practice.
Research Project 4	RPR01Y4	100%	0%	8	30	The purpose of this module is to allow the student to use the knowledge, skills and attitudes obtained throughout enrolment at MIRS, to conduct research in a responsible manner, by applying the research specific knowledge acquired in REM01Y3. In addition, students should contribute in a positive manner to foster a research climate in the medical imaging and radiation sciences sector.	At the end of this module, the student should be able to:  1. Function efficiently in a team context.  2. Prepare and submit a proposal to a research ethics committee and obtain ethical clearance.  3. Collect and analyse data using scientific methods and according to the plan approved in the research proposal.  4. Write up a research report inclusive of a review of applicable literature, according to undergraduate requirements.  5. Disseminate the research results through various means to appropriate audiences, to add to the existing body of knowledge and foster a positive research climate.
Specialized Diagnostic Practice 3	SDP01Y3	100%	0%	7	24	The purpose of this module is to build on the knowledge gained from Diagnostic Practice 1 and 2 and introduces you to	At the end of this module, the students should be able to:  1. Evaluate specialised techniques and

						specialized imaging techniques, related anatomy, pathology and equipment. It provides you with the clinical knowledge to understand specialized procedures, research and problem solving to work independently. Integration of knowledge gained on technique, equipment, anatomy, pathology and basic pattern recognition skills allows you to identify normal and abnormal appearances on a radiograph. This module provides you with the knowledge to enable you to source and critique a journal article using scientific research parameters.	equipment in order to relate their suitability to the suspected pathology within the radiology department.  2. Assess the developments in techniques and protocols in order to produce high quality diagnostic images using the most current practice and protocols.  3. Apply knowledge and skills to perform and adapt diagnostic techniques applicable to the age and clinical presentation of the patient.
Specialized Diagnostic Practice 4	SDP01Y4	100%	0%	8	12	The purpose of this module is to build on the knowledge gained from Diagnostic Practice 1, 2 and 3 and Specialized Diagnostic Practice III. It provides you with the clinical knowledge to understand specialized procedures, research and problem solving to work independently. Integration of knowledge gained on technique, equipment, anatomy, pathology and basic pattern recognition skills allows you to identify normal and abnormal appearances on a radiograph. This module provides you with the knowledge to enable you to source and critique a journal article using scientific research parameters	At the end of this module, the students should be able to:  1. Demonstrate the ability to choose appropriate modalities and protocols in relation to the indications presented upon examination request  2. Will be able to identify gaps between the theoretical knowledge acquired and the Clinical Practice issues that they experience.  3. Apply knowledge and skills to perform and adapt diagnostic techniques applicable to the age and clinical presentation of the patient.
Specialized Ultrasound	SUS01Y3	100%	0%	7	12	The purpose of this module is to develop the clinical competencies of a Diagnostic	At the end of this module, you should be able to:

						<p>Sonographers at a third-year level and will enable the students to apply the theory of specialized ultrasound scanning techniques and protocols pertaining to solid organ transplantation, haemodialysis access and tropical disease within the clinical environment.</p>	<ol style="list-style-type: none"> <li>1. Integrate knowledge of Anatomy, Physiology and Pathology, to select the correct sonographic protocol and equipment applicable to a specific anatomical region.</li> <li>2. Describe sonographic protocols of the most frequently encountered examinations in order to produce the required images for each examination.</li> <li>3. Employ independent research and self-study strategies to develop problem solving, critical thinking and evaluation skills with respect to clinical situations.</li> <li>4. Apply pattern recognition criteria in order to determine normal and aberrant sonographic appearances, which may indicate pathology.</li> <li>5. Critically assess and perform responsible patient care to ensure patient welfare and adhere to basic principles of human rights and professional ethics.</li> <li>6. Critically assess the sonographic images and apply pattern recognition to determine normal and abnormal ultrasound appearances.</li> </ol>
Specialized Ultrasound	SUS01Y4	100%	0%	8	12	<p>The purpose of this module is to develop the clinical competencies of a Diagnostic Sonographers at a</p>	<p>At the end of this module, you should be able to:</p> <ol style="list-style-type: none"> <li>1. Integrate knowledge of</li> </ol>

						<p>fourth-year level and will enable the students to apply the theory of specialized ultrasound scanning techniques and protocols pertaining to emergency ultrasound, lung ultrasound and theranostics and the ethical issues that arise from them.</p>	<p>Anatomy, Physiology and Pathology, to select the correct sonographic protocol and equipment applicable to a specific anatomical region.</p> <p>2. Describe sonographic protocols of the most frequently encountered examinations in order to produce the required images for each examination.</p> <p>3. Employ independent research and self-study strategies to develop problem solving, critical thinking and evaluation skills with respect to clinical situations.</p> <p>4. Apply pattern recognition criteria in order to determine normal and aberrant sonographic appearances, which may indicate pathology.</p> <p>5. Critically assess and perform responsible patient care to ensure patient welfare and adhere to basic principles of human rights and professional ethics.</p> <p>6. Critically assess the sonographic images and apply pattern recognition to determine normal and abnormal ultrasound appearances.</p>
Therapeutics	THR01Y3	100%	0%	7	12	<p>The primary purpose of this module is to provide you with a broad understanding in the application of therapeutic radionuclides, imaging and the management of</p>	<p>At the end of this module, you should be able to:</p> <p>1. Apply and understand the rational for</p>

						<p>patients who receive radionuclides for treatment; this will be coupled with scientific applications and professional growth in practicing nuclear medicine.</p> <p>therapeutic nuclear medicine.</p> <p>2. Apply scientific skills and technologies to the clinical presentation for the production of optimum image quality in the therapeutic learning content.</p> <p>3. Demonstrate an understanding of the nuclear medicine therapeutic procedures.</p> <p>4. Apply research principles and skills and develop a research climate in nuclear medicine.</p>
Treatment Planning & Dosimetry 1	TPD01Y1	100%	0%	6	12	<p>The purpose of this module is to introduce the student to basic treatment planning principles and radiation therapy related apparatus.</p> <p>At the end of this module you should:</p> <p>1. Be able to describe target volumes according to the ICRU recommendations</p> <p>2. Have the knowledge to select the appropriate beam modifying devices for accurate treatment planning and delivery</p> <p>3. Be able to perform a simulation procedure accurately and logically for cancer of the cervix and sarcomas appropriately</p> <p>4. Be able to draw and evaluate a two dimensional (2D) dose distribution</p> <p>5. Be able to create and evaluate 3D treatment plans</p> <p>6. Accurately formulate a "set-up" instruction for the implementation of the selected treatment plan</p> <p>7. Able to interpret and evaluate a</p>

							<p>treatment prescription</p> <p>8. Be able to describe the treatment protocols used routinely in the department.</p>
Treatment Planning & Dosimetry 2	TPD01Y2	100%	0%	6	24	<p>The purpose of this module is to introduce the student to the basic radiobiological concepts and the role of diagnostic radiography, nuclear medicine and ultrasound in oncology. The principles of radiotherapy treatment planning of:</p> <ol style="list-style-type: none"> <li>1. Non-malignant disorders;</li> <li>2. Skin and lip cancers;</li> <li>3. Head and neck malignancies;</li> <li>4. Male reproductive system malignancies;</li> <li>5. Cancers of the alimentary tract and major digestive glands AND</li> <li>6. Oncological emergencies.</li> </ol>	<p>At the end of this module, the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Discuss the effect of radiation on tissues and tumours and apply this knowledge to clinical radiotherapy</li> <li>2. Interpret and apply anatomical, pathological and clinical data in order to accurately discuss the oncological treatment planning and management of each neoplasm mentioned above.</li> <li>3. Have the knowledge to select the appropriate beam modifying devices for accurate treatment planning and delivery</li> <li>4. Perform a CT-simulation procedure accurately and logically</li> <li>5. Create and evaluate 3D treatment plans</li> <li>6. Accurately formulate "set-up" instructions for the implementation of the selected treatment plan</li> <li>7. Accurately interpret and evaluate a treatment prescription</li> <li>8. Accurately describe the treatment protocols used routinely in the department</li> </ol>



						<p>9. Accurately describe (or identify) the organs at risk and the dose values acceptable for these organs</p> <p>10. Define beam energy and the factors influencing it</p> <p>11. Define SSD/SAD techniques</p> <p>12. Explain beam position, field parameters and beam orientation</p> <p>13. Evaluate the effect of tumour depth, patient separation, size and shape of portals and use of beam-modifying and/or shaping devices in dose calculation</p> <p>14. Alert the Oncologist to any problems with the prescription</p> <p>15. Describe how the treatment prescription will be applied in practice</p> <p>16. Evaluate the prescription together with the plan and identify any areas of concern.</p>
Treatment Planning & Dosimetry 3	TPD01Y3	100%	0%	7	12	<p>The purpose of this module is to focus on specialised treatment planning, equipment and treatment with particle beams.</p> <p>At the end of this module, the student should be able to:</p> <p>1. Describe the principles of radiotherapy treatment planning in order to correctly produce and evaluate a radiotherapy treatment plan for different systems.</p> <p>2. Describe the basic construction and working principles of equipment used in radiotherapy in order to select the most suitable equipment</p>

							for the treatment of a radiotherapy patient.
Treatment Planning & Dosimetry 4	TPD01Y4	100%	0%	8	12	The purpose of the module is to provide the student with detailed knowledge of advanced radiotherapy treatment planning and specialized techniques in a way that encourages critical and independent thinking in order to adapt to changes in the dynamic field of radiation oncology and participate in the development and review of radiotherapy protocols.	At the end of this module, the student should be able to:  1. Evaluate the merits of complex radiotherapy protocols in order to adapt to changes in the field of radiation oncology and participate in the development and review of radiotherapy protocols  2. Integrate knowledge from practical demonstrations with theory in order to precisely describe specialized treatment planning procedures  3. Apply pathological, radiobiological and radiation physics knowledge to provide an optimal brachytherapy service to radiotherapy patients.
Ultrasound Clinical Practice 1	UCP01Y1	100%	0%	6	24	The purpose of this module is to develop the clinical competencies required in a Diagnostic Sonographer at a first-year level. This will be achieved through the assimilation of the theoretical knowledge gained from the modules Imaging Technology and Diagnostic Ultrasound Practice. This knowledge forms the basis required to apply such knowledge in the clinical context to competently examine patients in the specified fields. The student will also become able to produce and analyse	At the end of this module a student should be able to:  1. Demonstrate the knowledge of the principles of ultrasound physics, anatomy & pathology as applied to the clinical environment  2. Perform patient care & communicate in a manner which ensures that the patient's welfare is maintained.  3. Apply the principles of professional practice and medical ethics which will protect the

						<p>images which aid in the diagnosis of pathology and to give verbal accounts of the findings.</p>	<p>right and well-being of the patient.</p> <p>4. Assess the clinical history and perform the sonographic protocols and procedures to produce optimum quality images in gynaecology, 1st trimester obstetrics &amp; basic abdomen.</p> <p>5. Critically assess the sonographic images and apply pattern recognition to determine normal and abnormal ultrasound appearances.</p> <p>6. Apply the principles of reflective practice in a manner that will, ensure holistic growth as a sonographer.</p>
Ultrasound Clinical Practice 2	UCP01Y2	100%	0%	7	30	<p>The purpose of this module is to develop the clinical competencies required in a Diagnostic Sonographer at a second-year level of study. This will be achieved through the assimilation of the theoretical knowledge gained from the modules Ultrasound Physics &amp; Instrumentation and Diagnostic Ultrasound Practice as well as the knowledge gained from your 1st year modules. This knowledge forms the basis required to apply such knowledge in the clinical context to competently examine patients in the specified fields. The student will also become able to produce and analyze images, which aid in the diagnosis of pathology and to give verbal accounts of the findings.</p>	<p>At the end of this module a student should be able to:</p> <p>1. Demonstrate the knowledge of the principles of ultrasound physics, anatomy &amp; pathology as applied to the clinical environment.</p> <p>2. Perform patient care &amp; communicate in a manner, which ensures that the patient's welfare is maintained.</p> <p>3. Apply the principles of professional practice and medical ethics which will protect the right and well-being of the patient.</p> <p>4. Assess the clinical history and perform the sonographic protocols and procedures to produce optimum quality images in gynaecology, 1st</p>

						<p>trimester obstetrics &amp; basic abdomen.</p> <p>5. Critically assess the sonographic images and apply pattern recognition to determine normal and abnormal ultrasound appearances.</p> <p>6. Apply the principles of reflective practice in a manner that will, ensure holistic growth as a sonographer.</p>
Ultrasound Clinical Practice 3	UCP01Y3	100%	0%	7	24	<p>The purpose of this module is to develop the clinical competencies required in a Diagnostic Sonographer at a third-year level of study. This will be achieved through the assimilation of the theoretical and practical knowledge gained in the previous years as well as the competencies obtained during the third year. This knowledge forms the basis required to apply such knowledge in the clinical context to competently examine patients. The competencies gained from this module, will allow the student to produce and analyse diagnostic images which aid in the diagnosis of pathology and will allow the student to give verbal/written reports of the findings as required.</p> <p>At the end this module the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Integrate knowledge of Anatomy, Physiology and Pathology, to select the correct sonographic protocol and equipment applicable to a specific anatomical region.</li> <li>2. Describe sonographic protocols of the most frequently encountered examinations in order to produce the required images for each examination.</li> <li>3. Employ independent research and self-study strategies to develop problem solving, critical thinking and evaluation skills with respect to clinical situations.</li> <li>4. Apply pattern recognition criteria in order to determine normal and aberrant sonographic appearances which may indicate pathology.</li> </ol>

							<p>5. Critically assess and perform responsible patient care to ensure patient welfare and adhere to basic principles of human rights and professional ethics.</p> <p>6. Critically assess the sonographic images and apply pattern recognition to determine normal and abnormal ultrasound appearances.</p> <p>7. Apply the ultrasound specific measures which ensure that the health and safety of patients, self and colleagues are maintained.</p> <p>8. Plan, develop and apply quality management appropriate to the sonographic context.</p> <p>9. Apply the principles of reflective practice in a manner that will, ensure holistic growth as a sonographer.</p>
Ultrasound Clinical Practice 4	UCP01Y4	100%	0%	8	24	<p>The purpose of this module is to develop the clinical competencies required in a Diagnostic Sonographer at a final year level of study. This will be achieved through the assimilation of the theoretical and practical knowledge gained in the previous years as well as the competencies obtained during the final year. This knowledge forms the basis required to apply such knowledge in the clinical context to competently examine patients. The competencies gained from this module, will allow the student to</p>	<p>At the end of this module the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Demonstrate the knowledge of the principles of ultrasound physics, anatomy &amp; pathology as applied to the clinical environment</li> <li>2. Perform patient care &amp; communicate in a manner which ensures that the patient's welfare is maintained.</li> <li>3. Apply the principles of professional practice and medical ethics which will protect the</li> </ol>

						<p>produce and analyse diagnostic images which aid in the diagnosis of pathology and will allow the student to give verbal/written reports of the findings as required.</p>	<p>right and well-being of the patient.</p> <p>4. Assess the clinical history and perform the sonographic protocols and procedures to produce optimum quality images in gynaecology, 1st trimester obstetrics &amp; basic abdomen.</p> <p>5. Critically assess the sonographic images and apply pattern recognition to determine normal and abnormal ultrasound appearances.</p> <p>6. Apply the principles of reflective practice in a manner that will ensure holistic growth as a sonographer.</p>
Ultrasound Physics Instrumentation	UPI01Y2	100%	0%	6	24	<p>The purpose of this module is to build on the knowledge gained in first year and to introduce the student to more advanced physical principles of Diagnostic ultrasound and its interactions with human tissue. The knowledge gained will develop a student who can operate the equipment competently and safely to produce high quality diagnostic images. This module will form a basis for application in the clinical context.</p>	<p>At the end of this module the student should be able to do the following:</p> <p>1. Analyse the principles of ultrasound physics, which will allow application in the clinical context.</p> <p>2. Demonstrate the principal components of medical ultrasound units.</p> <p>3. Link the scientific knowledge of physics principles to the equipment for the production of quality ultrasound images.</p> <p>4. Assess the sonographic image for technical quality and determine any necessary improvements.</p> <p>5. Relate the known bio-effects of ultrasound in human</p>

							tissue to potential bio-hazards
Ultrasound Practice 1	USP01Y1	100%	0%	6	24	<p>The purpose of this module is to introduce the student to the most frequently encountered sonographic examinations of the non-pregnant and 1st trimester pregnant female pelvis, prostate and the abdominal organs. Integration of Anatomy, Physiology and Pathology, ultrasound techniques, patient care and image interpretation will develop the competency to produce and analyze high quality sonographic images for normal and abnormal appearances.</p>	<p>At the end of this module the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Integrate knowledge of Anatomy, Physiology and Pathology, to select the correct sonographic protocol and equipment applicable to a specific anatomical region.</li> <li>2. Describe sonographic protocols of the most frequently encountered examinations of the pregnant and non-pregnant female pelvis in order to produce the required images for each examination.</li> <li>3. Employ independent research and self-study strategies to develop problem solving, critical thinking and evaluation skills with respect to clinical situations.</li> <li>4. Apply pattern recognition criteria in order to determine normal and aberrant sonographic appearances which may indicate pathology.</li> <li>5. Critically assess and perform responsible patient care to ensure patient welfare and adhere to basic principles of human rights and professional ethics.</li> </ol>
Ultrasound Practice 2	USP01Y2	100%	0%	6	30	<p>The purpose of this module is to introduce the student to second &amp; third trimester obstetric</p>	<p>At the end of this module the student should be able to:</p>

						<p>scanning and to small parts ultrasound scanning. Integration of anatomy, physiology and pathology, ultrasound techniques, patient care and image interpretation will develop the competency to produce and analyze high quality sonographic images for normal and abnormal appearances.</p>	<ol style="list-style-type: none"> <li>1. Integrate knowledge of Anatomy, Physiology and Pathology, to select the correct sonographic protocol and equipment applicable to a specific anatomical region.</li> <li>2. Describe sonographic protocols of the most frequently encountered examinations of the pregnant patient in order to produce the required images for each examination.</li> <li>3. Employ independent research and self study strategies to develop problem solving, critical thinking and evaluation skills with respect to clinical situations.</li> <li>4. Apply pattern recognition criteria in order to determine normal and aberrant sonographic appearances which may indicate pathology.</li> <li>5. Critically assess and perform responsible patient care to ensure patient welfare and adhere to basic principles of human rights and professional ethics.</li> </ol>
Ultrasound Practice 3	USP01Y3	100%	0%	7	24	<p>The purpose of this module is to integrate anatomy and physiology knowledge acquired in the previous years of study to develop competencies on the ultrasound appearances and criteria. The newly acquired competencies form a crucial basis for pattern recognition</p>	<p>At the end this module the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Analyse the pattern on the ultrasound image to determine normal and aberrant sonographic appearances which may indicate pathology.</li> </ol>



						necessary to determine normal and aberrant sonographic appearances which may indicate pathology.	<p>2. Describe direct and indirect sonographic criteria associated with common pathologies affecting the adult gastrointestinal tract, vascular and musculoskeletal systems.</p> <p>3. Determine differential diagnosis for each pathology in the order of decreasing likelihood.</p> <p>4. Apply knowledge of anatomy, physiology and clinical presenting signs and symptoms to narrow down the list of differential diagnosis for the pathology understudy.</p>
Ultrasound Practice 4	USP01Y4	100%	0%	8	24	The purpose of this module is to introduce the student to advanced obstetrics, Paediatric Ultrasound, Neurosonography and Adult & Paediatric Echocardiography. Integration of anatomy, physiology and pathology, ultrasound techniques, patient care and image interpretation will develop the competency to produce and analyze high quality sonographic images for normal and abnormal appearances and allow for optimal management of the high-risk pregnancy.	<p>At the end this module the student should be able to:</p> <p>1. Integrate knowledge of Anatomy, Physiology and Pathology, to select the correct sonographic protocol and equipment applicable to a specific anatomical region.</p> <p>2. Describe sonographic protocols applicable to the high-risk pregnant patient in order to produce the required images for each examination.</p> <p>3. Employ independent research and self-study strategies to develop problem solving, critical thinking and evaluation skills with respect to clinical situations.</p> <p>4. Apply pattern recognition criteria in</p>

						<p>order to determine normal and aberrant sonographic appearances which may indicate pathology.</p> <p>5. Critically assess and perform responsible patient care to ensure patient welfare and adhere to basic principles of human rights and professional ethics.</p>
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## HS12.7 DEPARTMENT OF NURSING

### BACHELOR OF NURSING (B9N02Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Anatomy 1A	ANT01A1	100%	0%	5	10	<p>The purpose of the module is to introduce the students to human anatomy, to equip students with knowledge of the composition of the body, the structure of cells, tissues, joints and muscles of the body. They will understand the micro anatomy of the cells and tissues; the classification, microanatomy, macro anatomy of the skeleton as well as the joints and muscles. Introduce the students to the central, peripheral and autonomic nervous systems, the special sense organs and the endocrine glands, to equip students with knowledge of the, the structure of neural tissue, the brain, cranial nerves and plexuses, the sympathetic and parasympathetic nervous systems as well as the nose, eye, tongue and ear. They</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p>

						will understand the gross and micro anatomy of all the organs and structures. The students will be able to articulate and apply the knowledge to the content of the other modules. This will enable the student to maximize the healthcare of the South African population.	<p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different anatomical concepts.</p>
Anatomy 1B	ANT01B1	100%	0%	5	12	<p>The purpose of the module is to introduce the student to the gross and micro anatomy of the endocrine, cardiovascular, lymphatic, respiratory, and digestive systems, urinary and reproductive systems to equip students with knowledge of the position, structure and function of the organs. They will understand the micro anatomy of the organs. The students will be able to articulate and apply the knowledge to the content of the other modules.</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p>

							Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation through the different Anatomical concepts.
Fundamental Nursing Science 1A	FNS01A1	100%	0%	6	12	<p>The purpose of the module is to develop a competent student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualized, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with introduction to ethos and professional practice and history of nursing.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with introduction to ethos and professional practice and history of nursing.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language</p>

							<p>skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration</p>
Fundamental Nursing Science 1B	FNS01B1	100%	0%	6	12	<p>The purpose of the module is to develop a competent student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualized, culturally sensitive care, in line with de-colonization, to individuals, families,</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with the nursing process; Maslow's hierarchy of needs; health needs.</p> <p>Work effectively with others as a member</p>

						<p>groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with the nursing process; Maslow's hierarchy of needs; health needs.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic,</p>
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							legal, ethical, environment, cultural and demographic influences into consideration.
Fundamental Nursing Science Clinical Practice 1C	FNC01Y1	100%	0%	6	60	<p>The purpose of the module is to develop a competent student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with introduction to ethos and professional practice and history of nursing and emergency care conditions and the nursing process; Maslow's hierarchy of needs; health needs.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with introduction to ethos and professional practice and history of nursing and emergency care conditions and the nursing process; Maslow's hierarchy of needs; health needs.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p>

							<p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
General Nursing Science 1A	GNS01A2	100%	0%	7	12	<p>The purpose of the module is to develop a competent medical-surgical student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised,</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with haematological system, immunological system and oncology;</p>



						<p>culturally sensitive care, in line with decolonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>cardiovascular system; pulmonology system.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with haematological system, immunological system and oncology; cardiovascular system; pulmonology system.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on</p>
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							<p>a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
General Nursing Science 1B	GNS01B2	100%	0%	7	12	<p>The purpose of the module is to develop a competent medical-surgical student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with gastrointestinal system; endocrine system; musculoskeletal system; paediatric conditions.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with gastrointestinal system; endocrine system; musculoskeletal system; paediatric conditions.</p> <p>Collecting, analysing,</p>

						<p>organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning. Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
General Nursing Science 2A	GNS01A3	100%	0%	8	17	<p>The purpose of the module is to develop a competent medical-surgical student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To</p> <p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with neurological;</p>

						<p>provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population</p>	<p>renal, fluid, electrolyte and acid balance and reproductive conditions.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with neurological; renal, fluid, electrolyte and acid balance and reproductive conditions.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on</p>
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							a variety of learning and problem-solving strategies and develop an attitude of life-long learning. Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.
General Nursing Science 2B	GNS01B3	100%	0%	8	14	<p>The purpose of the module is to develop a competent medical-surgical student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with ear, nose, throat and eye conditions; integumentary system and burns; geriatric nursing care.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with ear, nose, throat and eye conditions; integumentary system and burns; geriatric nursing care.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p>

							<p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
General Nursing Science 3A	GNS01A4	100%	0%	8	12	<p>The purpose of the module is to develop a competent student with appropriate knowledge, skills and attitudes needed for quality management of the Nursing Unit and the education of patients and staff, as well as community empowerment in promoting the health of the individual, family, group and community.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p>

							<p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others</p>
General Nursing Science 3B	GNS01B4	100%	0%	8	12	<p>The purpose of the module is to develop a competent student with appropriate knowledge, skills and attitudes needed for quality management of the Nursing Unit and the education of patients and staff, as well as community empowerment in promoting the health of the individual, family, group and community.</p>	<p>Distinguish between behaviourism, interactional and constructivist learning approaches.</p> <p>Operationalize the six principles of holistic learning to a specific unit.</p> <p>Identify principles of teaching and learning. Incorporate the factors that influence teaching and learning.</p> <p>Analyse the reflective process and apply within the nursing unit.</p> <p>Differentiate between a learning accompanist and a teacher with reference to: role, knowledge, interpersonal relations with student, teaching and evaluation methods.</p> <p>Debate the problems of the Unit Manager as accompanist and propose solutions to that effect.</p> <p>Define the concept of adult student within clinical learning context.</p>

							<p>Describe the characteristics of an adult student according to Mellish.</p> <p>Debate how the above will influence learning principles.</p> <p>Analyse the objectives of clinical teaching.</p> <p>Briefly describe the characteristics of a clinical unit to serve as an effective learning context.</p> <p>Identify various teaching strategies /media for their suitability for clinical teaching and training.</p> <p>Debate various methods of evaluation that will be suitable for clinical teaching</p>
General Nursing Science Clinical Practice 1C	GNC01Y2	100%	0%	7	60	<p>The purpose of the module is to develop a competent medical-surgical student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with haematological system, immunological system and oncology; cardiovascular system; pulmonology system and gastrointestinal system; endocrine system; musculoskeletal system; paediatric conditions.</p> <p>Work effectively with others as a member of a team, group,</p>



						<p>lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with haematological system, immunological system and oncology; cardiovascular system; pulmonology system and gastrointestinal system; endocrine system; musculoskeletal system; paediatric conditions.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning</p>
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							<p>and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
General Nursing Science Clinical Practice 2C	GNC01Y3	100%	0%	8	32	<p>The purpose of the module is to develop a competent medical-surgical student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p>	<p>The student shows the competency to do an assessment of a patient.</p> <p>Analyse and synthesize the assess data and make a nursing diagnosis for a patient.</p> <p>Determine how to prevent, reduce, or resolve the identified problems, how to support the patient's strengths and how to implement nursing interventions in an organised, goal directed and best care manner.</p> <p>Carrying out (or delegate) and documenting the planned nursing interventions.</p> <p>Measuring the degree to which outcomes have been achieved and identify factors that positively or negatively influenced the outcome</p>
General Nursing Science Clinical Practice 3C	GNC01Y4	100%	0%	8	22	<p>The purpose of the clinical skills is to enable the student to identify the growth, development and needs (personal hygiene) in the different life phases. Students need to be able to assess the health promotion needs of the</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical,</p>

						<p>individual, family and community by distinguishing between health and non-health-related problems; and apply the principles and methods of health promotion actions/strategies and health education; and identify social and physical resources for health care in the individual, family and community. Clinical preparedness is of essence to the prospective nurse. In order to reach an acceptable level of clinical preparedness it will be necessary for the student to participate in certain clinical activities that take place in the field of community nursing specifically.</p>	<p>creative, reflective and problem-solving skills in the executing best care practice nursing to patients within the nursing unit applying ethos and professional standards.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in nursing unit management applying ethos and professional standards.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others. Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p>
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						<p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
Mental Health Nursing Science 1	MHS01A2	100%	0%	5	6	<p>The purpose of the module is to develop a competent mental-health nurse with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South African population.</p> <p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with mental health conditions.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with mental health conditions.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of</p>

					<p>Mental Health is a dynamic, interactive process in a patients' environment and the patient's relative mental health status is reflected by the interaction in his/her environment. The mentally healthy individual/family/group and community have the potential to become mentally ill. For that reason, the psychiatric and mental health nurse facilitates the promotion of mental health by mobilization of resources within the individual/family/group/communities' internal and external environment.</p> <p>The continuous interaction between the psychiatric and mental health nurse and the patient is an important resource in the facilitation of the patients' mental health. The psychiatric and mental health nurse needs facilitative communication skills that include all aspect of verbal and non-verbal communication, as well as empathy, unconditional acceptance, congruence and authenticity, to be able to utilize her/himself as a sensitive, therapeutic, professional source.</p> <p>By studying the etiology of mental illness and recognising signs and symptoms,</p>	<p>oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/ mental health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve mental health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
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						<p>the psychiatric and mental health nurse can nurse the patient as a whole (body, mind and spirit) to promote his/her mental health. The student utilises critical/analytical, problem-solving skills and reflective skills to assess the patient according to the DSM 5 and mobilise the necessary nursing interactions for the promotion of the mental health of the patient.</p> <p>The student would be able to discuss and debate the recent trends in the field of communication <u>critically</u>. The student communicates with the individual, family and community within the whole person approach. The Theory for Health Promotion, as well as other relevant models of communication will be studied critically.</p>	
Mental Health Nursing Science Clinical Practice 1	MHC01A2	100%	0%	5	4	<p>Mental Health is a dynamic, interactive process in a patients' environment and the patient's relative mental health status is reflected by the interaction in his/her environment. The mentally healthy individual/family/group and community have the potential to become mentally ill. For that reason, the psychiatric and mental health nurse facilitates the promotion of mental health by mobilization of resources within the individual/family/group/communities' internal and external environment.</p> <p>The continuous interaction between the</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate</p>

						<p>psychiatric and mental health nurse and the patient is an important resource in the facilitation of the patients' mental health. The psychiatric and mental health nurse needs facilitative communication skills that include all aspect of verbal and non-verbal communication, as well as empathy, unconditional acceptance, congruence and authenticity, to be able to utilize her/himself as a sensitive, therapeutic, professional source.</p> <p>By studying the etiology of mental illness and recognising signs and symptoms, the psychiatric and mental health nurse can nurse the patient as a whole (body, mind and spirit) to promote his/her mental health. The student utilises critical/analytical, problem-solving skills and reflective skills to assess the patient according to the DSM 5 and mobilise the necessary nursing interactions for the promotion of the mental health of the patient.</p>	<p>effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation</p>
Midwifery Nursing Science 1A	MNS01A3	100%	0%	7	16	<p>The purpose of the module is to develop a competent midwife student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during preconception, normal (low risk) pregnancy, childbirth, puerperium, and neonatal period. To provide a range of</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with normal pregnancy and normal neonate.</p>

						<p>comprehensive individualised, culturally sensitive care to individuals, families, groups and communities. The ability to manage selected emergency situations to maximize the health of women and their new-born infants from birth to six or eight weeks after birth.</p>	<p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with normal pregnancy and normal neonate.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning. Understand and solve health problems by taking</p>
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							social, economic, legal, ethical, environment, cultural and demographic influences into consideration.
Midwifery Nursing Science 1B	MNS01B3	100%	0%	7	16	<p>The purpose of the module is to develop a competent midwife student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during preconception, normal (low risk) pregnancy, childbirth, puerperium, and neonatal period. To provide a range of comprehensive individualised, culturally sensitive care to individuals, families, groups and communities. The ability to manage selected emergency situations to maximize the health of women and their new-born infants from birth to six or eight weeks after birth.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with normal labour and puerperium; introduction of growth and development: infant and children (0-6 years).</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with normal labour and puerperium; introduction of growth and development: infant and children (0-6 years).</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of</p>

							<p>oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
Midwifery Nursing Science 2A	MNS01A4	100%	0%	8	16	<p>The purpose of the module is to develop a competent midwife student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during preconception, normal (low risk) pregnancy, childbirth, puerperium, and neonatal period. To provide a range of comprehensive individualised, culturally sensitive care to individuals, families,</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with abnormal pregnancy and abnormal neonates.</p> <p>Work effectively with others as a member of a team, group, organisation,</p>

						<p>groups and communities. The ability to manage selected emergency situations to maximize the health of women and their new-born infants from birth to six or eight weeks after birth.</p>	<p>community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with abnormal pregnancy and abnormal neonates.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social</p>
Midwifery Nursing	MNS01B4	100%	0%	8	16	. The purpose of the module is to develop a	Identifying and solving problems in

Science 2B						<p>competent midwife student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during preconception, normal (low risk) pregnancy, childbirth, puerperium, and neonatal period. To provide a range of comprehensive individualised, culturally sensitive care to individuals, families, groups and communities. The ability to manage selected emergency situations to maximize the health of women and their new-born infants from birth to six or eight weeks after birth.</p>	<p>which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with abnormal labour and puerperium.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with abnormal labour and puerperium.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving</p>
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							<p>contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
Midwifery Nursing Science Clinical Practice 1C	MNC01Y3	100%	0%	7	44	<p>The purpose of the module is to develop a competent midwife student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during preconception, normal (low risk) pregnancy, childbirth, puerperium, and neonatal period. To provide a range of comprehensive individualised, culturally sensitive care to individuals, families, groups and communities. The ability to manage selected emergency situations to maximize the health of women and their new-born infants from birth to six or eight weeks after birth.</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with normal pregnancy and normal neonate; normal labour and puerperium; introduction of growth and development: infant and children (0-6 years).</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills</p>

							<p>and attitudes in the nursing care of patients with normal pregnancy and normal neonate; normal labour and puerperium; introduction of growth and development: infant and children (0-6 years).</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
Midwifery Nursing Science	MNC01Y4	100%	0%	8	32	The purpose of the module is to develop a competent midwife	Identifying and solving problems in which responses

Clinical Practice 2C						<p>student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during preconception, normal (low risk) pregnancy, childbirth, puerperium, and neonatal period. To provide a range of comprehensive individualised, culturally sensitive care to individuals, families, groups and communities. The ability to manage selected emergency situations to maximize the health of women and their new-born infants from birth to six or eight weeks after birth.</p>	<p>indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with abnormal pregnancy and neonates; abnormal labour and puerperium.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with abnormal pregnancy and neonates; abnormal labour and puerperium.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the</p>
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							<p>world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
Pharmacology 1	PHM01B1	100%	0%	5	12	<p>The purpose of the module is to develop a competent student with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases. This will enable the student to maximize the healthcare of the South</p>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills in the executing best care practice nursing to patients with gastro-intestinal conditions.</p> <p>Work effectively with others as a member of a team, group, organisation, community.</p> <p>Organizing and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence based on knowledge, skills and attitudes in the nursing care of patients with</p>



						African population.	<p>respiratory conditions.</p> <p>Collecting, analysing, organizing and critically evaluating information.</p> <p>Communicate effectively using visual and language skills in the modes of oral and/ or written presentation.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.</p> <p>Explore and identify nursing/health trends and problems.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude of life-long learning.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environment, cultural and demographic influences into consideration.</p>
Physiology 1A	PHS01A1	100%	0%	5	12	The purpose of the module is to enable the student to explain histological and functional aspects of the endocrine, cardiovascular (with special reference to blood test, cardiac cycle and blood circulation). They will also be able to identify	Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.

						<p>specific microscopic examples of the endocrine system and to explain functional aspects thereof. They will also be able to use his/her knowledge of the lymphatic system to explain non-specific defence mechanisms of the body and refer to basic concepts of immunity. This module further enables the student to explain histological and functional aspects of the respiratory, digestive and urinary systems, and the basic principles of the pulmonary ventilation and the formation of urine. He/she will also be able to discuss histological and functional adaptations of the male and female reproductive systems, oogenesis, spermatogenesis, the process of fertilisation, pregnancy, parturition and foetal circulation and changes that take place after birth.</p>	<p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Physiological concepts.</p>
Physiology 1B	PHS01B1	100%	0%	5	13	<p>The purpose of the module is to enable the student to explain histological and functional aspects of the endocrine, cardiovascular (with special reference to blood test, cardiac cycle and blood circulation). They will also be able to identify specific microscopic examples of the endocrine system and to explain functional aspects thereof. They will also be able to use his/her knowledge of the lymphatic system to</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p>

						<p>explain non-specific defence mechanisms of the body and refer to basic concepts of immunity. This module further enables the student to explain histological and functional aspects of the respiratory, digestive and urinary systems, and the basic principles of the pulmonary ventilation and the formation of urine. He/she will also be able to discuss histological and functional adaptations of the male and female reproductive systems, oogenesis, spermatogenesis, the process of fertilisation, pregnancy, parturition and foetal circulation and changes that take place after birth.</p>	<p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation through the different physiological concepts.</p>
Physiology 2A	PHS01A2	100%	0%	6	12	<p>The purpose of this module is to describe the relationship between the structure and the specialised functions of cells, integument, skeleton and muscles, explain the principles of neurophysiology, nervous and endocrine systems predict the effect of aging on each of the above-mentioned systems and identify examples of interactions between other organ systems to develop students reasoning to assess health-related needs and problems in humans.</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-</p>

							<p>study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation through the different Physiological concepts.</p>
Physiology 2B	PHS01B2	100%	0%	6	13	<p>The purpose of this module is to describe the relationship between the structure and the specialised functions of the cardiovascular, immunity and respiratory systems, digestive, excretory and reproductive systems, predict the effect of aging on each of the above-mentioned systems and identify examples of interactions between other organ systems to develop students reasoning to assess health-related needs and problems in humans.</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p>

							<p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Physiological concepts.</p>
Psychology 1	PSY1AA1	50%	50%	5	6	<p>The purpose of this subject is to introduce the students to the discipline of Psychology, methods within Psychology, elements of Consciousness, Sensation and Perception, learning and Memory as well as stress and coping, Health psychology and positive Psychology. Psychological science provides us with explanations for behaviour that we otherwise might not know from direct observation alone. Psychology consists of multiple perspectives (e.g., developmental, social, and biological) that, when integrated, give us a broader context for understanding human behaviour. This will equip the student with knowledge of psychology. They will understand the Basis of human behaviour equipping the student with knowledge of the concepts related to psychology. The students will be able to articulate and apply the knowledge to the content of this module to the outcomes of the other modules related</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Psychology.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of</p>

						to nursing and midwifery. This will enable the student to maximize the healthcare of the South African population.	related systems by recognising that problem-solving contexts do not exist in isolation through the different anatomical concepts.
Research Methodology	RSM01Y3	100%	0%	8	8	<p>The aim is to develop the following practical, foundational and reflective competencies:</p> <ul style="list-style-type: none"> <li>• Research, fieldwork, experimental, professional, technological leadership and consultation skills.</li> <li>• Knowledge of and insight into the research process focusing on reasoning, problem-solving, analysis, synthesis, interpretation, comparison, evaluation, formulation and communication of research data.</li> <li>• Competencies and skills in innovation and the application of knowledge in new contexts as well as decision-making, strategic thinking, self-directedness, organization and teamwork.</li> <li>• Benefits for the Student:</li> <li>• The modules add significant value to the student's competence in terms of the following: <ul style="list-style-type: none"> <li>• Development of life-skills and leadership skills.</li> <li>• Development of problem-solving and critical thinking skills.</li> <li>• Development of logical reasoning.</li> <li>• Preparation to conduct individual or team research as a novice researcher.</li> <li>• Benefits to Society</li> <li>• On completion of the module the</li> </ul> </li> </ul>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills for executing the research process Working effectively with others as a member of a team, group organisation or community.</p> <p>Working in groups when solving health problems by means of the research process.</p> <p>Organising and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence, based on the knowledge, skills and attitudes for research methodology.</p> <p>Plan a research project, based on theoretical and methodological knowledge, skills and attitudes.</p> <p>Collecting, analysing, organising and critically evaluation information.</p> <p>Communicate the results of the research process by using visual,</p>

						<p>student will contribute to society in terms of the following:</p> <ul style="list-style-type: none"> <li>• Improvement of the quality of the nursing/health care by preparing to implement effective research and problem-solving skills.</li> <li>• Promotion of ethical values in nursing/health practices.</li> <li>• Improvement of nursing/health care by implementing leadership and consultation skills.</li> </ul> <p>Exit outcomes and assessment criteria: The student demonstrates the ability to conduct research in investigating nursing and health-related problems in order to improve quality of care.</p>	<p>statistical and linguistic skills in oral and written format.</p> <p>Use technology effectively in the execution of the research process.</p> <p>Communicating effectively using visual, mathematical and/or language skills in the modes of oral/written persuasion.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environmental, cultural and demographic influences into consideration.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude for life-long learning and management skills with regard to research methodology.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Explore and identify nursing/health trends and problems in society to improve people's health.</p> <p>Demonstrate cultural sensitivity when conducting the research process.</p> <p>Explore clinical, managerial and educational career opportunities as reflective leader.</p>
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							Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation
Research Project	RSP01Y4	100%	0%	8	8	<p>The aim is to develop the following practical, foundational and reflective competencies:</p> <ul style="list-style-type: none"> <li>• Research, fieldwork, experimental, professional, technological leadership and consultation skills.</li> <li>• Knowledge of and insight into the research process focusing on reasoning, problem-solving, analysis, synthesis, interpretation, comparison, evaluation, formulation and communication of research data.</li> <li>• Competencies and skills in innovation and the application of knowledge in new contexts as well as decision-making, strategic thinking, self-directedness, organization and teamwork.</li> <li>• Benefits for the Student: <ul style="list-style-type: none"> <li>• The modules add significant value to the student's competence in terms of the following: <ul style="list-style-type: none"> <li>• Development of life-skills and leadership skills.</li> <li>• Development of problem-solving and critical thinking skills.</li> <li>• Development of logical reasoning.</li> <li>• Preparation to conduct individual or team research as a novice researcher.</li> <li>• Benefits to Society</li> <li>• On completion</li> </ul> </li> </ul> </li> </ul>	<p>Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.</p> <p>Internalisation of logical, critical, creative, reflective and problem-solving skills for executing the research process Working effectively with others as a member of a team, group organisation or community.</p> <p>Working in groups when solving health problems by means of the research process.</p> <p>Organising and managing oneself and one's activities responsibly and effectively.</p> <p>Assess own competence, based on the knowledge, skills and attitudes for research methodology.</p> <p>Plan a research project, based on theoretical and methodological knowledge, skills and attitudes.</p> <p>Collecting, analysing, organising and critically evaluation information.</p> <p>Communicate the results of the research process by</p>



						<p>of the module the student will contribute to society in terms of the following:</p> <ul style="list-style-type: none"> <li>• Improvement of the quality of the nursing/health care by preparing to implement effective research and problem-solving skills.</li> <li>• Promotion of ethical values in nursing/health practices.</li> <li>• Improvement of nursing/health care by implementing leadership and consultation skills.</li> </ul> <p>Exit outcomes and assessment criteria: The student demonstrates the ability to conduct research in investigating nursing and health-related problems in order to improve quality of care.</p>	<p>using visual, statistical and linguistic skills in oral and written format.</p> <p>Use technology effectively in the execution of the research process.</p> <p>Communicating effectively using visual, mathematical and/or language skills in the modes of oral/written persuasion.</p> <p>Understand and solve health problems by taking social, economic, legal, ethical, environmental, cultural and demographic influences into consideration.</p> <p>Explore and reflect on a variety of learning and problem-solving strategies and develop an attitude for life-long learning and management skills with regard to research methodology.</p> <p>Using science and technology effectively and critically, showing responsibility towards the environment and health of others.</p> <p>Explore and identify nursing/health trends and problems in society to improve people's health.</p> <p>Demonstrate cultural sensitivity when conducting the research process.</p> <p>Explore clinical, managerial and educational career opportunities as reflective leader.</p>
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							Demonstrating and understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation
Sociology 1	SOC1AA1	50%	50%	5	6	<p>The purpose of this subject is to introduce the students to the discipline of Sociology. Sociological theory offers important analytical tools to interpret and enhance understanding of social life and the social world in which we live in. In this learning unit, theoretical perspectives and arguments will be offered. This will equip the student with knowledge of sociology. They will understand the Basis of human behaviour within a society equipping the student with knowledge of the concepts related to sociology. The students will be able to articulate and apply the knowledge to the content of this module to the outcomes of the other modules related to nursing and midwifery. This will enable the student to maximize the healthcare of the South African population.</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Sociology.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation through the different anatomical concepts.</p>

Sociology 2A	SOC2AA2	50%	50%	6	6	<p>The purpose of this subject is to introduce the students to the discipline of Sociology. Sociological theory offers important analytical tools to interpret and enhance understanding of social life and the social world in which we live in. In this learning unit, theoretical perspectives and arguments will be offered. This will equip the student with knowledge of sociology. They will understand the Basis of human behaviour within a society equipping the student with knowledge of the concepts related to sociology. The students will be able to articulate and apply the knowledge to the content of this module to the outcomes of the other modules related to nursing and midwifery. This will enable the student to maximize the healthcare of the South African population.</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Sociology.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project. Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation through the different anatomical concepts.</p>
Psychology 2A: Developmental Psych	PSY2AA2	50%	50%	6	6	<p>The purpose of this subject is to understand Child development Theories and Data Gathering Methods, principles of Growth and Development, parental development, Birth and the New-born's Readiness for Life, Infancy, physical Self-development of the</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding psychology.</p> <p>Work effectively with others as a member of a team, group,</p>

						<p>Brain, the body and Motor Skills, Cognitive Development: Piaget's Theory and Vygotsky's Socio-Cultural Viewpoint, Emotional Development and the Establishment of Intimate Relationships, development of the Self and Social Cognition, sex Difference and Gender-Role Development, Aggression Altruism and Moral development and finally the Family, peers, school and technology. Psychological science provides us with explanations for behaviour that we otherwise might not know from direct observation alone. Psychology consists of multiple perspectives (e.g., developmental, social, and biological) that, when integrated, give us a broader context for understanding human behaviour. This will equip the student with knowledge of psychology. They will understand the Basis of human behaviour equipping the student with knowledge of the concepts related to psychology. The students will be able to articulate and apply the knowledge to the content of this module to the outcomes of the other modules related to nursing and midwifery. This will enable the student to maximize the healthcare of the South African population.</p>	<p>organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation through the different psychological concepts.</p>
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## POSTGRADUATE DIPLOMA IN MIDWIFERY (E9MW1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Ethical Legal Professional Frameworks	ELP8X01	100%	0%	8	8	The purpose of this module is to: Develop the specialist students' knowledge, attributes related to the ethical-legal-professional frameworks in the provision of comprehensive care to women throughout their reproductive cycle, families and communities.	The midwife specialists will: Practice and facilitate midwifery care within ethical-legal parameters of the profession. Utilize evidence-based practices to solve contextual problems and develop policies and guidelines within the context of midwifery. Facilitating lifelong learning and self-directedness to sustain competence. Facilitate advocacy for midwifery practice through collaboration with all stakeholders. Engage in planning, commissioning and managing of a midwifery unit.
Research	REN8XY1	100%	0%	8	10	The specialist student will be able to identify the problem, diagnose and recommend opportunities for improvement based on the developed research capacity and acquired research expertise in midwifery.	The midwife specialists will: Engage in scholarly activities to inform evidenced based midwifery practice. Utilize, manage and communicate data to support decision-making and research.
Normal and Abnormal Pregnancy	NAP8X01	100%	0%	8	8	To empower the midwife specialist student with knowledge, skills and values needed during the nursing process and to practice within ethical-legal-professional parameters of the midwife, to assess, plan, implement,	To empower the midwife specialist student with knowledge, skills and values needed during the nursing process and to practice within ethical-legal-professional parameters of the midwife, to assess, plan, implement, manage the woman and her family during preconception, and antenatal period.

						manage the woman and her family during preconception, and antenatal period.	
Normal and Abnormal Labour	NAL8X02	100%	0%	8	8	To empower the midwife specialist student with knowledge, skills and values to use during the nursing process and to practice within ethical-legal-professional parameters of the midwife, to promote, restore and maintain the health of individuals within the family during normal and abnormal labour.	Demonstrate the knowledge, understanding of the physiology of normal and abnormal labor. Demonstrate the knowledge, understanding and skills to apply nursing process in management of high-risk pregnant woman during labor, within ethical, legal, and professional frameworks. Use appropriate skills during the mechanism of labor to prevent avoidable complications during labor. Manage high-risk pregnant women presenting with obstetrical emergencies.
Clinical Practice in Midwifery	CPM8XY1	100%	0%	8	40	To empower the midwife specialist student with knowledge, skills and values needed during the nursing process and to practice within ethical-legal-professional parameters of the midwife, to assess, plan, implement, manage the woman and her family during preconception, and antenatal period.	Demonstrate the ability utilize knowledge, skills and values to practice within the ethical, legal and professional frame works to assess, plan, implement necessary interventions to manage the woman and preconception, and the antenatal period comprehensively.
Postnatal Care	PSC8X02	100%	0%	8	8	To empower the midwife specialist student with knowledge, skills and values to use during the nursing process and to practice within	Demonstrate the knowledge and understanding of physiologic homeostasis during puerperium. Use nursing process to manage adaptation in a high-risk postnatal

						<p>ethical-legal-professional parameters of the midwife, to promote, restore and maintain the health of individuals within the family during postnatal care.</p>	<p>woman and her family, within ethical, legal and professional frameworks. Demonstrate the knowledge and understanding of the nursing process during comprehensive management of a high-risk postnatal woman within legal, ethical and professional frameworks. Apply nursing process in management of obstetrical emergencies during postnatal care, using the steps of the nursing process, within ethical, legal and professional frameworks.</p>
The Neonate	NEO8X02	100%	0%	8	8	<p>To empower the midwife specialist student with knowledge, skills and values to use during the nursing process while practicing within ethical-legal-professional parameters of the midwife, to promote, restore and maintain the health of individuals within the family during neonatal care.</p>	<p>Demonstrate the ability to apply the nursing process in management of physiological changes that occur at birth in the high-risk neonate's transition to extra-uterine homeostasis while practicing within ethical, legal and professional frameworks. Demonstrate the knowledge and understanding to apply nursing process during comprehensive management of a high-risk neonate within the legal, ethical and professional frameworks. Demonstrate the ability to apply the nursing process during comprehensive management of danger signs of a high-risk neonate within ethical, legal and professional frameworks. Demonstrate the ability to apply the nursing</p>

							process in the management of complications of a high-risk neonate within ethical, legal and professional frameworks.
Clinical Practice Midwifery 2	CPM8XY2	100%	0%	8	40	To empower the midwife specialist student with knowledge, skills and values to use during the nursing process and to practice within ethical-legal-professional parameters of the midwife, to promote, restore and maintain the health of individuals within the family during labour, postnatal and neonatal care.	Demonstrate the ability utilize knowledge, skills and values to practice within the ethical legal framework in the management of a low and high-risk woman during the intrapartum, postnatal and neonatal periods to promote, restore and maintain the health of individuals comprehensively while practicing within ethical, legal and professional frameworks.

#### POSTGRADUATE DIPLOMA IN CRITICAL CARE NURSING (ADULT) (E9IC1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Content
Ethical Legal Professional Frameworks	ELP8X01	100%	0%	8	8	The purpose of the module is to develop a competent specialist adult critical care nurse with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the ethical-legal-professional framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To	The specialist student will be able to practice and facilitate specialised adult critical care within ethical-legal-professional parameters of the nursing profession.



						provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonisation, to individuals, families, groups and communities. Specialised best care practice nursing which is evidence-based to promote, prevent, cure, rehabilitate and refer diseases and conditions related to lifestyle and burden of diseases. This will enable the specialist adult critical care nurse to maximise healthcare of the South African population.	
Research	REN8XY1	100%	0%	8	10	The purpose of this module is to provide the specialist student with knowledge skills and values to enable them to identify the problem, diagnose and recommend opportunities for improvement based on the developed research capacity and acquired research expertise in a critical care discipline.	Module outcome: The specialist student will be able to identify the problem, diagnose and recommend opportunities for improvement based on the developed research capacity and acquired research expertise in a critical care discipline.
Cardiology and Cardiothoracic Surgery	CCS8XY1	100%	0%	8	8	The purpose of this module is to provide the critical care specialist student with knowledge, skills and values to able to assess, plan, implement, manage and evaluate the advanced and	Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following: Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-

						specialised medical and surgical conditions of the cardiology system of the critically ill patient within the legal-ethical framework of the nursing profession, basic and advanced sciences and family relations.	making and problem-solving skills within the community of critical care service delivery at local and national levels within the private and public curative health care service delivery context Promotion of ethical values in critical care nursing/ health care practice Improvement of critical care nursing/ health care within the private and public curative health care context through the implementation of decision-making and problem-solving skills Promotion of the health of the compromised critically ill individual and the special population including the critically ill paediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/ consultation and management and research skills
Pulmonology and Specific Pulmonary Conditions	PSP8X01	100%	0%	8	8	The purpose of this module is to provide the critical care specialist student with knowledge, skills and values with reference to the assessment, planning, implementing, managing and evaluation of the advanced and specialised medical and surgical	Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following: □ Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-making and problem-solving skills within the community of critical care service delivery at

						<p>conditions of the pulmonology system in order to maintain ventilation in the critically ill patient, improve diffusion over the pulmonary membrane and to maximise the provision of oxygen to and removal of carbon dioxide from the tissue by means of quality clinical decision making within the legal-ethical framework of the nursing profession, basic and advanced sciences and family relations.</p>	<p>local and national levels within the private and public curative health care service delivery context</p> <ul style="list-style-type: none"> <li>□ Promotion of ethical values in critical care nursing/ health care practice</li> <li>□ Improvement of critical care nursing/ health care within the private and public curative health care context through the implementation of decision-making and problem-solving skills</li> <li>□ Promotion of the health of the compromised critically ill individual and the special population including the critically ill paediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/ consultation and management and research skills.</li> </ul>
Clinical Practice in Adult Critical Care	CPA8XY1	100%	0%	8	40	<p>The purpose of the Postgraduate Diploma in Critical Care Nursing (Adult) is to strengthen and deepen the students' knowledge and expertise in adult critical care as a specialty of the nursing profession. It is designed to provide the best evidenced-based adult critical care through application of knowledge, skills, attitudes, and</p>	<p>Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following:</p> <p>Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-making and problem-solving skills within the community of critical care service delivery at local and national levels within the private and public curative health</p>

						values within the ethical-legal-professional framework during the performance of cardiac and pulmonary clinical skills and procedures.	care service delivery context Promotion of ethical values in critical care nursing/ health care practice Improvement of critical care nursing/ health care within the private and public curative health care context through the implementation of decision-making and problem-solving skills Promotion of the health of the compromised critically ill individual and the special population including the critically ill pediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/ consultation and management and research skills.
Nephrology	NEP8X02	100%	0%	8	8	The purpose of this module is to provide the critical care specialist student with knowledge, skills and values to be able to assess, plan, implement, manage and evaluate advanced and specialised medical and surgical conditions of the nephrology system of the critically ill adult patient within the legal-ethical framework of the nursing profession, basic and advanced sciences	Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following: Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-making and problem-solving skills within the community of critical care service delivery at local and national levels within the private and public curative health care service delivery context Promotion of ethical values in critical care

						and family relations.	nursing/ health care practice Improvement of critical care nursing/ health care within the private and public curative health care context through the implementation of decision-making and problem-solving skills Promotion of the health of the compromised critically ill individual and the special population including the critically ill paediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/ consultation and management and research skills.
Neurology and Neurosurgery	NNS8X02	100%	0%	8	8	The purpose of this module is to provide the critical care specialist student with knowledge, skills and values to be able to assess, plan, implement, manage and evaluate advanced and specialised medical and surgical conditions of the neurology system of the critically ill adult patient within the legal-ethical framework of the nursing profession, basic and advanced sciences and family relations.	Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following: Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-making and problem-solving skills within the community of critical care service delivery at local and national levels within the private and public curative health care service delivery context Promotion of ethical values in critical care nursing/ health care practice Improvement of critical care nursing/ health care

							<p>within the private and public curative health care context through the implementation of decision-making and problem-solving skills</p> <p>Promotion of the health of the compromised critically ill individual and the special population including the critically ill paediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/consultation and management and research skills</p>
General Surgery, Sepsis, and Endocrinology	SSE8X02	100%	0%	8	8	<p>The purpose of this module is to provide the learner with specialised and advanced knowledge, skills and values with regard to the assessment, planning, implementation, management and evaluation of medical and surgical nursing problems and conditions involving general surgery, sepsis, endocrinology and shock in the critically ill patient within the legal-ethical framework of the nursing profession, basic and advanced sciences and family relations.</p>	<p>Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following:</p> <p>Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-making and problem-solving skills within the community of critical care service delivery at local and national levels within the private and public curative health care service delivery context</p> <p>Promotion of ethical values in critical care nursing/ health care practice</p> <p>Improvement of critical care nursing/ health care within the private and public curative health care context through the implementation of</p>

							<p>decision-making and problem-solving skills</p> <p>Promotion of the health of the compromised critically ill individual and the special population including the critically ill pediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/consultation and management and research skills.</p>
Clinical Practice in Adult Critical Care 2	CPA8XY2	100%	0%	8	32	<p>The purpose of the Postgraduate Diploma in Critical Care Nursing (Adult) is to strengthen and deepen the students' knowledge and expertise in adult critical care as a specialty of the nursing profession. It is designed to provide the best evidenced-based adult critical care through application of knowledge, skills, attitudes, and values within the ethical-legal-professional framework during the performance of cardiac and pulmonary clinical skills and procedures.</p>	<p>Upon completion of critical care modules, the learner will be able to contribute to the critical care community in terms of the following:</p> <p>Improvement in the quality of critical care nursing/ health care through the implementation of effective decision-making and problem-solving skills within the community of critical care service delivery at local and national levels within the private and public curative health care service delivery context</p> <p>Promotion of ethical values in critical care nursing/ health care practice</p> <p>Improvement of critical care nursing/ health care within the private and public curative health care context through the implementation of decision-making and problem-solving skills</p> <p>Promotion of the health of the compromised</p>

							critically ill individual and the special population including the critically ill pediatric patient; critically ill pregnant woman; as well as a critically ill elderly patient coming from the community with medical and surgical conditions through the implementation of clinical advocacy/consultation and management and research skills
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### POSTGRADUATE DIPLOMA IN NURSING EDUCATION (E9ED1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Content
Ethical Legal Professional Frameworks	ELP8X01	100%	0%	8	8	The purpose of this module is to develop the nursing education specialist students' knowledge, relevance, and applicability of ethical-legal-professional frameworks in the practice of Nursing Education and knowledge of management principles and processes and procedures as applied to Nursing Education practice.	<p>The nursing education specialists will:</p> <p>Practice and facilitate specialist nursing education within ethical-legal parameters of the profession</p> <p>Apply the knowledge of and facilitate evidence-based practice, nursing education in the specialist field to solve contextual problems and develop policies and guidelines.</p> <p>Appraise and develop self, peers and nurse/midwife specialist students by facilitating self-directedness/leadership and lifelong learning to maintain competence</p> <p>Facilitate advocacy for the profession and provision of specialist professional support for</p>



							<p>personnel, patients, families, and communities</p> <p>Engage in planning, commissioning, and managing an educational entity</p>
Research in Nursing Education	REN8XY 1	100%	0%	8	10	<p>The specialist student will be able to identify the problem, diagnose and recommend opportunities for improvement based on the developed research capacity and acquired research expertise in nursing education.</p>	<p>Purpose</p> <p>Outcomes</p> <p>The nursing education specialists will:</p> <p>Engage in scholarly activities to inform evidenced based practice, education or management</p> <p>Utilize, manage and communicate data to support decision-making and research.</p>
Didactics	DID8X0 1	100%	0%	8	8	<p>The nursing education specialist students facilitates teaching and learning of students, patients/clients, families and communities in conducive theoretical, simulation, online and clinical learning environments.</p> <p>Provide nursing education specialist student with knowledge, skills and attitude to design, implement, evaluate or review a programme or curriculum for teaching and learning of nurse specialist /midwife specialists.</p>	<p>The nursing education specialists will:</p> <p>Facilitate teaching and learning of students, patients/clients, families and communities in conducive theoretical, simulation, online and clinical learning environments.</p> <p>The nursing education specialists will:</p> <p>Design, implement, evaluate or reviews a programme or curriculum for teaching and learning of nurse/midwife specialists.</p>
Curriculum Orientation and Design	COG8X 01	100%	0%	8	8	<p>Provide nursing education specialist student with knowledge, skills and attitude to</p>	<p>The nursing education specialists will:</p> <p>Design, implement, evaluate or reviews a</p>

						design, implement, evaluate or review a programme or curriculum for teaching and learning of nurse specialist /midwife specialists.	programme or curriculum for teaching and learning of nurse/midwife specialists.
Teaching and Learning Strategies and Media	TLS8X02	100%	0%	8	8	The purpose of this module is provide the nursing education specialist student with knowledge and skills to facilitates teaching and learning of students, patients/clients, families and communities in conducive theoretical, simulation, online and clinical learning environments and apply different teaching and learning strategies and media in the facilitation of learning in nursing education practice appropriately.	The nursing education specialists will:  Facilitate teaching and learning of students, patients/clients, families and communities in conducive theoretical, simulation, online and clinical learning environments using different teaching strategies and media.
Assessment and Evaluation Strategies	AEL8X02	100%	0%	8	8	Learning outcomes, teaching and learning approaches and assessment demonstrate critical analysis of the different knowledge taxonomies and are aligned accordingly and assessment and evaluation strategies are appropriately used in teaching and learning activities in the practice of nursing education.	The nursing education specialists will be able to:  Engage in and facilitate assessment and evaluation of learning.

Contemporary Dynamics in Nursing Education	CDN8X0 2	100%	0%	8	8	The specialist student will engagement in teaching and learning activities demonstrates appropriate personal attributes (integrity, confidence, flexibility, mastery of subject matter, etc.), role model teaching and facilitate learning. Participate in and facilitate external stakeholder engagement. Participates in the governance structures of higher education institution and earns recognition of nursing education.	The nursing education specialists will be able to:  Apply knowledge of national and global contemporary dynamics impacting Nursing Education
Nursing Education Practice	PNE8XY 2	100%	0%	8	72	To strengthen and deepen the knowledge and skills of Nursing Education specialists and enable them to facilitate teaching, learning and assessment of students, patients/clients, families and communities in conducive simulation, online and clinical learning environments.	The nursing education specialists will:  Apply the knowledge, skills and attitude of and facilitate the management of the nursing education institution  Apply knowledge, skills and attitude of and facilitate learning in Nursing Education Practice.

## POSTGRADUATE DIPLOMA IN PRIMARY CARE NURSING (E9PC1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Ethical Legal Professional Frameworks	ELP8X01	100%	0%	8	8	The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups, and communities during their training as caring professionals.	The primary care nurse specialist student will be able to practice and facilitate primary care nursing within ethical-legal-professional parameters of the profession.
Research	REN8XY1	100%	0%	8	10	The purpose of the module is to develop a competent specialist primary care nurse specialist with specialized best primary care nursing practice, which is evidence-based to promote, prevent, cure, rehabilitate and refer diseases and conditions related to lifestyle and burden of diseases.	The primary care nurse specialist student will be able to identify the problem, diagnose and recommend opportunities for improvement based on the developed research capacity and acquired research expertise in primary care nursing.

ENT, Eye and Skin System	ENT8X01	100%	0%	8	8	<p>The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualized, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Specialised best primary care nursing practice, which is evidence-based to promote, prevent, cure, rehabilitate and refer diseases and conditions related to lifestyle and burden of diseases. This will enable the primary care nurse specialist</p>	<p>The Primary Care Nurse specialist student will be able to assess, diagnose, treat and care for individual patients, families and communities presenting with health problems at the primary care facilities related to the ear, nose and throat (ENT), eyes and skin (integumentary) using the acquired necessary clinical knowledge, skills, attitudes and values.</p>
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						to maximise healthcare of the South African population.	
Respiratory and Cardiovascular System	RCS8X01	100%	0%	8	8	<p>The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualized, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Specialized best primary care nursing practice, which is evidence-based to promote, prevent, cure, rehabilitate and refer diseases and conditions related to lifestyle and</p>	<p>The primary care nurse specialist student will be able to critically and comprehensively assess, diagnose and safely manage, including prescribing of medicine, the individual, family and community presenting at the primary care facility with health problems related to the respiratory and cardiovascular systems.</p>

						burden of diseases. This will enable the primary care nurse specialist to maximise healthcare of the South African population.	
Clinical Practice in Primary Care Nursing	CPP8XY1	100%	0%	8	28	The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonisation, to individuals, families, groups and communities. Specialised best primary care nursing practice, which is evidence-based to promote, prevent, cure, rehabilitate and	The primary care nurse specialist student will be able to perform primary care clinical skills and procedures pertaining to ENT, eye and skin (integumentary) and respiratory and cardiovascular within the relevant legal-ethical framework.

						refer diseases and conditions related to lifestyle and burden of diseases. This will enable the primary care nurse specialist to maximise healthcare of the South African population.	
HIV, STI and Genito-urinary System	HSG8X02	100%	0%	8	8	<p>The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. Demonstrate knowledge and understanding of the management of the common conditions of the female and male reproductive and urinary systems through constructive debates and use of treatment modalities: Ace -Inhibitor Antibiotic</p>	The primary care nurse specialist student will be able to critically and comprehensively assess, diagnose and safely manage, including prescribing of medicine, the individual, family and community presenting at the primary care facility with health problems related to Integrated Sexual Reproductive Health and Genito-urinary systems.



						Analgesics	
Gastro-Intestinal system and Endocrine System	GSE8X02	100%	0%	8	8	<p>The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonisation, to individuals, families, groups and communities. Specialised best primary care nursing practice, which is evidence-based to promote, prevent, cure, rehabilitate and refer diseases and conditions related to lifestyle and burden of diseases. This will enable the primary care</p>	<p>The primary care nurse specialist student will be able to critically and comprehensively assess, diagnose and safely manage, including prescribing of medicine for the individual, family and community presenting at the primary care facility with health problems related to the gastrointestinal system and endocrine system.</p>

						nurse specialist to maximise healthcare of the South African population.	
Musculo-Skeletal and Central Nervous System	MSC8X02	100%	0%	8	8	<p>The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonisation, to individuals, families, groups and communities. Specialised best primary care nursing practice, which is evidence-based to promote, prevent, cure, rehabilitate and refer diseases and conditions related to lifestyle and</p>	The primary care nurse specialist student will be able to critically and comprehensively assess, diagnose and safely manage, including prescribing of medicine for the individual, family and community presenting at the primary care facility with health problems related to the musculo-skeletal system and central nervous systems.

						burden of diseases. This will enable the primary care nurse specialist to maximise healthcare of the South African population.	
Clinical Practice in Primary Care Nursing 2	CPP8XY2	100%	0%	8	46	The purpose of the module is to develop a competent specialist primary care nurse specialist with appropriate knowledge, skills and attitudes needed, the application of primary care nursing within the professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonisation, to individuals, families, groups and communities. Specialised best primary care nursing practice, which is evidence-based to promote, prevent, cure,	The primary care nurse specialist student will be able to perform primary care clinical skills and procedures pertaining to GIT, Endocrine, Muscular skeletal, nervous system and emergency care. within the relevant legal-ethical framework.

						rehabilitate and refer diseases and conditions related to lifestyle and burden of diseases. This will enable the primary care nurse specialist to maximise healthcare of the South African population.	
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### POSTGRADUATE DIPLOMA IN HEALTH SERVICES MANAGEMENT (E9HS1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Content
Ethical Legal Professional Frameworks	ELP8X01	100%	0%	8	8	The purpose of the module is to develop a competent specialist health services manager with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the ethical-legal-professional framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals.	The health services management specialist student will be able to practice and facilitate specialised health services management within ethical-legal-professional parameters of the profession.
Research	REN8XY1	100%	0%	8	10	The purpose of the module is to develop a competent health services manager with appropriate knowledge, skills and attitudes needed, the application of the nursing process, within the	The health services management specialist student will be able to identify the problem, diagnose and recommend opportunities for improvement based on the developed

						professional, legal-ethical framework to promote, restore and maintain the health of individuals, families, groups and communities during their training as caring professionals. To provide a range of comprehensive individualised, culturally sensitive care, in line with de-colonization, to individuals, families, groups and communities. Best care practice nursing which is based on evidence-based nursing to promote, to prevent, to cure, rehabilitation and referral diseases and conditions related to lifestyle and burden of diseases.	research capacity and acquired research expertise in health services management.
Health Services Management	HSM8X01	100%	0%	8	8	The purpose of the module is to develop a competent health services manager with appropriate knowledge, skills and attitudes needed to make decisions and solve problems within the health service by applying evidence-based competencies.	The health services management student will be able to practice and facilitate decision making and research within the ethical-legal-professional parameters of health services management.
Leadership Development	LDQ8X01	100%	0%	8	8	To develop health services managers who are competent, world-class leaders.	The health services management specialist student will be able to evaluate the quality of service in the health service, manage resources, identify the risks and

							manage them, initiate and manage innovative projects.
Clinical Practice	CPH8XY 1	100%	0%	8	72	To develop health services managers who are able to manage the operations or the units of health services.	The health services management specialist student will be able to manage the operation or unit of a health service.
Health Services Management	CHM8X 02	100%	0%	8	8	To develop health services managers who are self-directed, life-long learners, and who are competent to conceptualise concepts at strategic level.	The health services management specialist student will be able to be self-directed in a health service and to become a life-long learner health services manager, who is able to conceptualise concepts at strategic level of the organisation.
Health Services Management Practices	CHP8X0 2	100%	0%	8	8	To develop a strategic health services managers who are who are scientific, understand the international principles and who can apply these principles in their contexts.	The health services management specialist student will be able to critique an article in health services management, and manage a health service at executive level using international principles.
Resource Management	RMN8X 02	100%	0%	8	8	To develop health services managers who can manage the resources effectively, mitigate and eradicate risks within the healthcare service.	The health services management specialist student will be able to manage the resources within a healthcare service, and manage the risks accordingly.

**BACHELOR OF OPTOMETRY (B9O02Q)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
Binocular Vision 1	BVI00Y3	100%	0%	6	14	<p>The primary purpose of this module is to provide learners with the ability to:</p> <p>Understand the basic principles behind the binocular system.</p> <p>To apply these principles and to decide what specific aspects of binocularity need to be probed in more detail in a specific patient</p> <p>Learners should start reflecting on the strategies the brain may adopt if an anomaly exists.</p> <p>To recognize, classify and on a prognosis as well as a simple treatment plan for non-pathological binocular anomalies.</p>	<p>At the end of this module, you should be able to do the following:</p> <p>Identify and grasp the understanding of the process of vision</p> <p>Associate performance in various visual fields with efficient visual function</p> <p>Associate visual function with basic visual skills</p> <p>Have the ability to describe normal and abnormal binocularity in language, which can be easily understood by the lay public.</p> <p>Take a relevant case history for a binocular vision anomaly.</p> <p>Conduct a binocular vision examination, which also distinguishes between a pathological and non-pathological etiology</p> <p>Decide on a treatment plan option and explain the advantages and disadvantages of the various options.</p>
Binocular Vision 2	BVI00Y4	100%	0%	8	16	<p>This module will enable students to: detect and diagnose abnormalities of the binocular visual system. Understand the underlying theory of how neural and other disorders manifest as binocular vision abnormalities.</p>	<p>The student will be able to:</p> <p>Take a case history from a patient with binocular vision problems</p> <p>□ Perform an examination on a patient with binocular vision problems in terms of preliminary tests, refraction,</p>

						<p>Make treatment decisions relating to the disorders that might be detected, and make appropriate referrals to the relevant medical specialities when necessary. In addition provide the necessary vision therapy regimens to patients requiring such interventions.</p>	<p>functional vision (vergence and accommodation status) and ocular health.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Analyze the examination test results and make a diagnosis for the patient with binocular vision problems and nystagmus.</li> <li><input type="checkbox"/> Explain or clarify the meaning of binocular vision concepts, namely amblyopia, eccentric fixation, horopter etc...</li> <li><input type="checkbox"/> Determine the probability for the functional cure of a patient with binocular vision anomalies</li> <li><input type="checkbox"/> Formulate an appropriate management plan for the patient with binocular vision problems.</li> <li><input type="checkbox"/> Show concern, integrity and professionalism for patients with binocular vision problems and be aware of the impact these problems can have on their quality of life.</li> </ul>
Biochemistry 1B	BIC01B1	50%	50%	5	15	<p>This module – Principles of Biochemistry – lays the foundation for Biochemistry as the language and central core of the Life Sciences. It provides students with a fundamental, general knowledge of basic principles and techniques in Biochemistry that would equip them</p>	<p>Understand why water is important for life</p> <p>Grasp the fundamentals of acid-base chemistry</p> <p>Understand what buffers are and what role they play in the cell</p> <p>Understand the nature of amino acids</p> <p>Understand the amphoteric properties of amino acids and peptides</p>



						<p>for further undergraduate studies in Biochemistry in further years. It also serves as a service module for students who do not wish to major in Biochemistry, but who require an introductory module as part of study in the Life Sciences or Optometry.</p>	<p>Understand the levels of protein structure</p> <p>Understand the formation and characteristics of protein secondary structure elements</p> <p>Understand the tertiary structure of proteins and how tertiary structure links with protein function</p> <p>Understand protein quaternary structure and the concept of allostery</p> <p>Understand the nature and structure of lipids</p> <p>Understand the structure of DNA and its isoforms</p> <p>Know the different forms of RNA in the cell as well as the structure and function of each.</p>
Business Practice, Ethics and Jurisprudence	COB02Y4	100%	0%	7	8	<p>The primary purpose of this module is to provide learners with the ability to:</p> <p>To provide the student with the necessary skills to identify, develop and design integrated visual health care programs by means of analysis and critical reasoning. The module also provides the student with competent skills necessary to make professional decisions in the identification and evaluation of optimal visual environments by means of analysis and critical reasoning.</p>	<p>At the end of this module, you should be able to do the following:</p> <p>Apply through competency in professional and clinical responsibilities, scientific optometric skills, optical and allied technologies to ascertain the accuracy of the prescription of the eye care products to visually compromised people.</p> <p>Apply scientific health care skills and optometric technologies in the interactive consultation of patient history while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct.</p> <p>Apply scientific health care skills and</p>

						<p>optometric technologies in the examination of eye and eye related conditions within the context of health services appropriate to the needs of the community, while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct.</p> <p>Interact consultatively in the diagnosis and proposed management and delivery of eye care products, therapy and medication to visually compromised people, with knowledge of minimum standards of optometric care and apply self-reflex learning strategies during interactions.</p> <p>Interact consultatively in the management and delivery of eye care products, therapy and medication to visually compromised people, with knowledge of minimum standards of optometric care and apply self-reflex learning strategies during interactions.</p> <p>Record and maintain legible, secure data and patient information while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct stated in the patient charter.</p> <p>Manage and administer human, technical and other resources to ensure optimal diagnosis, prescription and delivery of eye and</p>
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							<p>visual care products or services.</p> <p>Apply self-reflexive learning strategies to continually improve the optometrically related service within health care services appropriate to the specific needs of the patient/client to ensure professional contribution to the needs of the society.</p>
Chemistry 1C	CEM1CA 1	50%	50%	5	15	<p>The primary purpose of this module is to develop the basic knowledge, understanding and practical skills of chemical principles and techniques of general chemistry as required for further modules in Optometry.</p>	<p>On completion of this learning event, the student should be able to:</p> <p>Distinguish between the different types of matter and their properties.</p> <p>Apply the principles of atomic and molecular structure to solve problems related to chemical bonding and molecular shapes.</p> <p>Predict the outcome of chemical reactions and write proper chemical equations</p> <p>Perform stoichiometric calculations.</p> <p>Discuss different acid-base theories and differentiate between weak and strong acids and bases.</p> <p>Apply IUPAC rules for nomenclature.</p> <p>Use scientific language to explain organic concepts.</p> <p>Analyse and solve problems regarding physical and</p>

							chemical properties of various functional groups. Demonstrate the ability to perform laboratory experiments safely and to interpret the results.
Community and Environmental Optometry	COB01Y4	100%	0%	7	8	<p>The primary purpose of this module is to provide learners with the ability to:</p> <p>To provide the student with the necessary skills to identify, develop and design integrated visual health care programs by means of analysis and critical reasoning. The module also provides the student with competent skills necessary to make professional decisions in the identification and evaluation of optimal visual environments by means of analysis and critical reasoning.</p>	<p>At the end of this module, you should be able to do the following:</p> <p>Apply through competency in professional and clinical responsibilities, scientific optometric skills, optical and allied technologies to ascertain the accuracy of the prescription of the eye care products to visually compromised people.</p> <p>Apply scientific health care skills and optometric technologies in the interactive consultation of patient history while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct.</p> <p>Apply scientific health care skills and optometric technologies in the examination of eye and eye related conditions within the context of health services appropriate to the needs of the community, while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct.</p> <p>Interact consultatively in the diagnosis and proposed management and delivery of eye care products, therapy</p>

							<p>and medication to visually compromised people, with knowledge of minimum standards of optometric care and apply self-reflex learning strategies during interactions.</p> <p>Interact consultatively in the management and delivery of eye care products, therapy and medication to visually compromised people, with knowledge of minimum standards of optometric care and apply self-reflex learning strategies during interactions. Record and maintain legible, secure data and patient information while adhering to appropriate medico-legal ethics, health and safety regulations and codes of conduct stated in the patient charter.</p> <p>Manage and administer human, technical and other resources to ensure optimal diagnosis, prescription and delivery of eye and visual care products or services.</p> <p>Apply self-reflexive learning strategies to continually improve the optometrically related service within health care services appropriate to the specific needs of the patient/client to ensure professional contribution to the needs of the society.</p>
Contact Lenses 1	CTL00Y3	100%	0%	6	14	The purpose of the module is to introduce the students to all aspects of contact lens fitting, this includes patient	<p>At the end of this module, you should be able to do the following:</p> <p>Design and fit soft contact lenses</p>

						management, initial assessment, lens selection, detailed fitting procedures for both basic rigid and soft contact lenses as well as after-care.	<p>Design and fit rigid contact lenses</p> <p>Conduct a thorough contact lens examination</p> <p>Examine and assess contact lens wearing patients on an on-going basis</p> <p>Recognize and diagnose the various contact lens induced physiological changes and pathologies</p> <p>Understand the optics of contact lenses</p>
Contact Lenses 2	CTL00Y4	100%	0%	8	16	<p>This module will enable students to: determine the need and applicability for the fitting of contact lenses; recognize, diagnose and understand the causes of various contact lens related abnormalities as well as the alleviation thereof; understand the metabolism and physiology of the cornea as it relates to the fitting of contact lenses; fit advanced contact lens patients with keratoconus, orthokeratology, bifocal contact lenses, for sport, post-LASIK; understand the implications of fitting contact lenses and the possible results and abnormalities that may arise.</p>	<p>At the end of this module, you should be able to do the following:</p> <p>Describe and memorize various contact lens materials and their characteristic parameters.</p> <p>Describe and memorize corneal physiology as it relates to the fitting of contact lenses.</p> <p>Examine and appraise patients for their suitability to wear contact lenses. Formulate and design contact lens fitting strategies and contact lens parameters that are relevant to each individual patient. Recognize and diagnose the various contact lens induced physiological changes and pathologies.</p> <p>Examine and assess contact lens wearing patients on an on-going basis.</p> <p>Analyze and formulate strategies for the alleviation of contact lens related physiological and</p>

						<p>pathological changes in the contact lens wearing cornea.</p> <p>Diagnose and then formulate appropriate contact lens fitting strategies for the exceptional contact lens patient (for example keratoconics, irregular corneas, post-LASIK corneas, bifocal contact lenses).</p> <p>Calculate appropriate mathematical and optical solutions to contact lens related problems.</p> <p>Make use of appropriate instrumentation in the examination of patients, and evaluation and quality-control of contact lenses.</p>
Dispensing Optometry 1	DOP00Y2	100%	0%	6	8	<p>The purpose of the module is to enable learners to understand the basic principles and characteristics of ophthalmic lenses. With the knowledge and skills you will learn in this course it will enable you to verify a pair of spectacles and identify spectacle frames, frame types and parts and as well as to fit and adjust the frames on patients face. With this knowledge this will enable you to prescribe a complete pair of spectacles that will suit patient's needs.</p> <p>The student should be able to:</p> <p>Identify lenses.</p> <p>Know the characteristics of the different type of lenses.</p> <p>Write and transpose a prescription in plus and minus cylinder form.</p> <p>Determine the powers of lenses by means of neutralization, lens measure and vertometer.</p> <p>Understand best form lenses.</p> <p>Understand lens measure and sagitta.</p> <p>Differentiate between thick and thin lenses.</p> <p>Understand prism and prismatic effect.</p> <p>Determine the prismatic effect of lenses in spectacle</p>

						frames using the vertometer.  Identify Aspheric Lenses.  Identify the different multifocal lenses.  Identify the different spectacle frame materials and parts.  Select a spectacle frame suitable to the needs and prescription of the patient.  Problem solving.
Dispensing Optometry 2	DOP00Y3	100%	0%	6	8	<p>The primary purpose of this module is to prepare the student to recognize various patients' needs in terms of frame selection, lens materials, lens designs and verification, and dispensing (new and repaired) eyewear</p> <p>At the end of this module, you should be able to do the following:</p> <p>Develop skills in frame selection and frame fitting to provide optimal visual efficiency, comfortable, attractive and meet the expectations of the patient.</p> <p>Follow procedures to order prescription spectacles and verify spectacles using a checklist approach to ensure a minimum of error, which in turn improves the quality of service to the spectacle wearer.</p> <p>Use of techniques to insert different lenses into different frame constructions.</p> <p>Apply fundamental principles and prerequisites to align and adjust spectacle frames.</p> <p>Repair and modify frames according to the needs of the patient.</p> <p>Choose the most appropriate protective eyewear to the patient's needs.</p>



							<p>Discuss special lens designs, their problems and the cosmetic appearance.</p> <p>Select the appropriate multifocal lens to the needs of the wearer, by identifying patient's needs, evaluate different designs, appropriate fitting techniques, patient selection and the problems that incorrect patient selection can experience.</p> <p>Match the appropriate lens treatment to the needs of the wearer.</p> <p>Makeup of a complete pair of spectacles, i.e. cutting, edging, and fitting lenses.</p>
General and Ocular Pharmacology	OPH00Y3	100%	0%	6	14	<p>This module will enable students to have a basic understanding of the most commonly used ocular pharmaceutical agents. The student will also be able to decide when these agents will be used, for which ocular conditions, in which doses and what the contra-indications and side-effects will be.</p>	<p>The student will be able to:</p> <p>Comprehend how basic pharmacological concepts work and will be able to differentiate the types of receptors found, how drugs work on these receptors, and how various drugs interact.</p> <p>Integrate this knowledge with how different drugs are absorbed, administered, transformed and excreted by the human system. Certain commonly used pharmacologic abbreviations will be discussed.</p> <p>Demonstrate their knowledge relating to all the principles of ocular pharmacokinetics by applying it to related topics.</p> <p>Know the specific ocular formulations as</p>

							<p>well as the vehicles used for delivery, stability of these agents and how they are stored</p> <p>Demonstrate a clear knowledge of the two main components of the autonomic nervous system will be obtained. Also of importance is how they correlate and relate to the various pharmacologic agents</p> <p>Discuss the agents which are used for cycloplegic purposes</p> <p>Discuss the agents which are used for mydriasis and their various properties and reactions, adverse effects and types</p> <p>Apply knowledge to decide which agents to use for miotic purposes and understand their side-effects and actions.</p> <p>Understand glaucoma medications in terms of their mechanism of action, side-effects and properties to facilitate the understanding of the disease process and its management.</p> <p>Discuss all ocular local anaesthetics and will understand the mechanism of action, side-effects and precautions as well as indications for use of these agents.</p> <p>Discuss anti-microbial agents in terms of the various microbes involved and how to manage them. Structures of microbes will be learnt, which agent is best to use for</p>
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							<p>the specific microbes and why.</p> <p>Decide which anti-inflammatory is the best to use for which condition and why. How the agents work and what the side-effects and special precautions are and when referral is necessary will also be understood.</p> <p>Gain knowledge on the different dry eye preparations, how they work and how and when to prescribe them. They will also integrate their knowledge of ocular pathology and contact lenses to decide when the agents are necessary.</p> <p>Gain knowledge of the different CL re-wetting solutions, their mechanism of action and indications for use. This will be integrated with CL knowledge to decide on a treatment plan.</p> <p>Gain knowledge of the ocular side-effects of commonly used systemic medications</p>
General Pathology for Optometry	OPA00Y2	100%	0%	6	12	<p>The purpose of this module in General Pathology for Optometry is to enable you the student to:</p> <p>recognize and differentiate the various general pathological processes.</p> <p>explain how this may affect the health of the person and to reflect on how the</p>	<p>You will be able to:</p> <p>Grasp the significance of pathology of important systemic diseases with significant ocular manifestations to Optometry</p> <p>Distinguish and categorize specific pathological problems associated with underlying systemic diseases based on their ocular manifestations</p>

					<p>situation can be resolved.</p> <p>recognize and differentiate the various pathological processes in hematological disorders and cardiovascular disease.</p> <p>appreciate interrelationships of ocular and systemic disease and recognize and identify underlying systemic diseases on the basis of their ocular manifestations.</p> <p>recognize and differentiate the various pathological processes in neurological diseases and endocrine disorders.</p> <p>appreciate interrelationships of ocular and systemic disease and recognize and identify underlying systemic diseases on the basis of their ocular manifestations.</p> <p>recognize and differentiate the various pathological processes in important systemic diseases with significant ocular manifestations.</p> <p>appreciate interrelationships of ocular and systemic disease and recognize and</p>	<p>Demonstrate an understanding of these specific pathological problems</p> <p>Consolidate and integrate the pathological processes in the various organ systems</p> <p>Collect, analyze, organize, and communicate information on specific pathological issues</p>
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						identify underlying systemic diseases on the basis of their ocular manifestations.	
Human Anatomy 1A	HAN01A1	100%	0%	5	12	<p>The purpose of this module is to explain the osteology, histology and the cardiovascular systems</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>3Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>4Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>

Human Anatomy 1B	HAN01B1	100%	0%	5	12	The purpose of this module is to explain the osteology, histology and the cardiovascular systems	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Human Physiology 2A	HPH02A2	100%	0%	5	12	Physiology provides foundational knowledge for pathology and clinically related subjects. The content covered in	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding</p>

						<p>this module includes an introduction to physiology, the cell, the integumentary system and aspects of osseous, muscle and neural tissue. Principles of the spinal cord and nerves, the autonomic nervous system and sensory function will also be covered in detail.</p>	<p>basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Human Physiology 2B	HPH02B2	100%	0%	5	12	<p>Physiology provides foundational knowledge for pathology and clinically related subjects. The content covered in this module includes an introduction to physiology, the cell, the integumentary system and</p>	<p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p>

						<p>aspects of osseous, muscle and neural tissue. Principles of the spinal cord and nerves, the autonomic nervous system and sensory function will also be covered in detail.</p>	<p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Introduction to Optometry	OPI00Y1	100%	0%	5	8	<p>The purpose of this module in Introduction to Optometry is to enable you the student to:</p> <p>Familiarize yourself with the general concepts utilized in the optometric profession, so that you may understand and appreciate the future role you may play when graduating as</p>	<p>At the end of this module, you should be able to do the following:</p> <p>Foster thinking, attitudes and behaviour appropriate to the optometric profession.</p> <p>Demonstrate knowledge of the construction, uses, care and limitations of optometric clinical equipment</p> <p>Show an awareness of basic community need in eye-care</p>



						<p>optometrists within the health care team, in private practice or in public health. A closer link to the department and exposure to the staff within the department is intended to create a basic identity which will culminate finally in the realization and success of your chosen career in Optometry.</p>	<p>Demonstrate knowledge of basic optometric definitions and concepts</p> <p>Show awareness of multiple areas within optometric practice</p> <p>Demonstrate basic knowledge of common eye pathologies, basic emergency situation management and the recognition of the need for urgent referral.</p>
Low Vision	LVI00Y4	100%	0%	8	16	<p>Section 1: Assessment and prescription options of low vision patients</p> <p>This module will provide learners with:</p> <p>Innovative skills necessary to identify the low vision person by means of analysis and critical reasoning and thus provide competent solutions based on professional and experimental skills.</p> <p>Section 2: Rehabilitation and management options for low vision person</p> <p>This module will provide learners with:</p> <p>Competent skills necessary to make professional decisions for the rehabilitation and management of the low vision person by means of analysis and</p>	<p>Section 1: Assessment and prescription options of low vision patients</p> <p>The student will be able to:</p> <p>Apply their theoretical and intellectual knowledge when investigating the visual status and health of low vision patients using strategic thinking and innovative skills</p> <p>Identify, evaluate and make skilled choices and responsible decisions using critical and creative thinking for prescription of low vision devices by reflecting on data, which has been collected and analysed to explore solutions for the low vision person.</p> <p>Decisions should be based on a holistic approach, which includes aspects of a cultural and social nature and involves interaction and verbal communication between the examiner, the patient, and the supervisor and family</p>

						critical reasoning.	<p>members (when appropriate).</p> <p>Section 2: Rehabilitation and management options for low vision person</p> <p>The student will be able to: Apply their theoretical and intellectual knowledge in practical examination situations using strategic thinking and innovative skills involving all team members concerned.</p> <p>Reflect on his knowledge and innovative skills to analyze the data available to explore solutions and make responsible decisions and skilled choices for the management and rehabilitation of the low vision person using critical and creative thinking.</p> <p>Communicate efficiently and empathetically with the examiner, the patient, and the supervisor and family members (where appropriate) taking cognizance of relevant cultural and social differences while developing an appropriate treatment plan.</p> <p>Integrate the low vision principles into general optometric practice and create entrepreneurial opportunities able to serve local and national communities.</p>
Mathematics 1A	MAT01A1	50%	50%	5	15	The purpose of this module is to develop an understanding of basic mathematical logic,	<p>On completion of this learning event, the student should be able to:</p> <p>Determine absolute values and solve equations</p>

						<p>set theory and the theory of decentration and integration of one variable functions by</p> <p>means of first principles and otherwise, and to include an understanding of the key terms,</p> <p>concepts, facts, principles, rules, and theories.</p>	<p>containing absolute values.</p> <p>Identify different proof techniques and apply them correctly to prove mathematical statements.</p> <p>Understand and apply the basic ideas of logic.</p> <p>Determine complex numbers and use their properties to perform operations on equations containing complex numbers.</p> <p>Determine limits and use limit laws to evaluate basic limits as well as limits of indeterminate form.</p> <p>Express the basic theoretical concepts underlying differentiation and integration.</p> <p>Differentiate and integrate basic exponential, logarithmic, trigonometric and hyperbolic functions.</p>
Microbiology 2A	MCB01A2	50%	50%	6	20	<p>The module aims at preparing students to discuss the basic principles of microbiology and to provide students with the necessary knowledge and competency to conduct standard laboratory experiments in relation to the requirements of the Optometry program.</p>	<p>Give an overview of the science of microbiology</p> <p>Understand significant contributions to microbiology to date</p> <p>Discuss microbiology as a science today</p> <p>Discuss prokaryotic cell structure and function</p> <p>Differentiate between typical prokaryotic and eukaryotic cells</p> <p>Understand and implement the preparation of specimens for microscopy and give a</p>

							<p>detailed explanation of the following techniques and successfully perform these techniques in the laboratory:</p> <p>I Microscopy</p> <p>ii media preparation</p> <p>iii inoculation and incubation</p> <p>iv Slide preparation and staining</p> <p>v Clean-up</p> <p>Describe microbial nutrition and growth, selective growth and enumeration</p> <p>Differentiate between sterilization, disinfection and sanitization</p> <p>Discuss the physical and chemical methods of microbial control</p> <p>Recognize microbial diversity and its place in the five kingdom classification system.</p> <p>Elaborate on the structure, classification and properties of viruses.</p> <p>Discuss eucaryotic viruses, prions and viroids.</p> <p>Discuss eucaryotic viruses, prions and viroids.</p> <p>Describe protists and their structures.</p>
Ocular Anatomy and Physiology 3A	OAF03A3	100%	0%	6	4	The purpose of this module is to explain the osteology, histology and the cardiovascular systems	1Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic

							<p>Anatomical/Physiological/Biological concepts.</p> <p>2. Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>3. Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>4. Collect, analyse, organise and critically evaluate information by means of preparation of the project.</p> <p>5. Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>6. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Ocular Anatomy and Physiology 3B	OAF03B3	100%	0%	6	4	Ocular Physiology provides foundational knowledge for ocular pathology and clinically related subjects. The content covered in Module 3B10 include the eyelids, the lacrimal apparatus, ocular blood flow as well as the physiology	Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.

						<p>of the cornea, while aspects of the aqueous humour, intra-ocular pressure, the vitreous humour, the lens and the retina will be dealt with in Module 3B20.</p>	<p>Work effectively with others as a member of a team, group, organisation or community by means of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project. Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p> <p>Identify and solve problems in which responses demonstrate that responsible decisions using critical and creative thinking have been made regarding basic Anatomical/Physiological/Biological concepts.</p> <p>Work effectively with others as a member of a team, group, organisation or community by means</p>
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							<p>of project presentations.</p> <p>Organise and manage oneself and one's activities responsibly and effectively by the attendance of lectures and self-study.</p> <p>Collect, analyse, organise and critically evaluate information by means of preparation of the project. Communicate effectively using visual, mathematical and/or language skills in the modes of an oral and written project presentation.</p> <p>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation through the different Anatomical/Physiological/Biological concepts.</p>
Ocular Pathology 1	OPA00Y3	100%	0%	6	20	<p>This module is structured to enable the student to understand, diagnose, differentiate and manage anterior eye diseases.</p>	<p>The student will be able to:</p> <p>Be proficient in patient examination, clinical diagnostic procedures and the interpretation of the results obtained.</p> <p>Distinguish between normal and abnormal presentations of the eye, especially the anterior segment.</p> <p>Correctly diagnose an ocular condition based on the signs and symptoms presenting in and relating to the anterior segment of the eye</p> <p>Understand the treatment and management of</p>

							<p>various diseases of the anterior segment of the eye</p> <p>Recognize the need for referral to specialist care when applicable.</p>
Ocular Pathology 2	OPA00Y4	100%	0%	8	20	<p>The purpose of this qualification is intended to provide qualifying students with the ability to:</p> <p>The purpose of this module in Ocular Pathology 2 is to enable you the student to:</p> <p>Identify, assess, diagnose and consider treatment options for the various ocular conditions present in the eye and to comprehend the impact thereof. It is intended to build on and integrate with the knowledge and skills obtained in Ocular Pathology 1 and Ocular Anatomy and Physiology facilitated in the previous year of optometric training.</p> <p>Facilitated knowledge and application should familiarize you with pathology and/or deviations from the normal, particularly eye-system related pathologies, that you may encounter in a patient care setting. As a successful student, you should have the competence to</p>	<p>You (the student) will be able to:</p> <p>differentiate between normal and abnormal presentations by recognizing, identifying, assessing, diagnosing and comprehending the treatment options for the various ocular conditions present in the eye.</p> <p>apply, build on and integrate with, the knowledge of Ocular Anatomy and Physiology, General Pathology for Optometry, General and Ocular Pharmacology and Ocular Pathology 1 facilitated in previous years of optometric training.</p> <p>be familiar with pathology and/or deviations from the normal, particularly eye-system related pathologies, that may be encountered in a patient care setting.</p> <p>have the competence to appropriately manage and/or refer patients with eye-health related problems, especially posterior segment related diseases, while optimally utilizing specialized diagnostic equipment and techniques.</p> <p>The areas mentioned above will be assessed based on the required knowledge, skills and</p>



						appropriately manage and/or refer patients with eye-health related problems, especially posterior segment related diseases, while optimally utilizing specialized diagnostic equipment and techniques.	the approach that is deemed to be competent.
Ophthalmic Optics	OOP00Y2	100%	0%	6	8	<p>The primary purpose of this course is to introduce the role and function of ophthalmic lenses and the eye as an optical instrument, with emphasis on astigmatism. Ophthalmic lenses including the eye are studied with particular regard to surface geometry, sagitta, thickness, dioptric power, additivity, vergence, astigmatism, rays, prismatic effect, bifocals and varifocals. The course introduces the student to methods of representing dioptric power, quantitative analysis of dioptric power and optical systems. Linear optics is introduced and includes magnification, blur, and chromatic aberration at the retina, cardinal points and axes with specific application to vision.</p>	<p>At the end of this module you should be able to do the following:</p> <p>Understand the role and function of ophthalmic lenses particularly with regard to astigmatism.</p> <p>Make calculations concerning the geometry and dioptric power of lenses particularly with regard to astigmatism.</p> <p>Make calculations concerning lenses in relation to the eye.</p> <p>Understand the role and function of ophthalmic lenses particularly about prismatic effects.</p> <p>Make calculations concerning the deflection of rays by lenses including bifocal lenses.</p> <p>Make calculations concerning magnification, image size, blur associated with lenses and the eye with allowance for astigmatism.</p> <p>Make calculations of optical systems, particularly transferences and cardinal points.</p>
Optics	OPO00Y2	100%	0%	6	12	Optics is the study of light, that part of the	able to do the following:

						<p>electromagnetic spectrum that falls into the visible region. The purpose of this module is to assist the student to understand the basics of light, how it works and its interaction with other transparent media and also how it interacts with itself. All these factors have an adverse effect on image formation through optical systems and may affect image quality and vision. This course provides the student with a broader understanding and insight of the finer aspects of how light passes through the different media as this plays an important role with lens design for optical instruments and spectacle lenses. This knowledge will help the student design optical systems and spectacle lenses that will improve image imperfections that will produce better optical quality instruments and spectacle lenses.</p>	<p>Discuss the different theories, describe the characteristics and explain the behaviour of light when it reacts with different media.</p> <p>Explain the concept of Vergence</p> <p>Differentiate between thin and thick lenses, optical systems and the magnifications obtained.</p> <p>Differentiate between the different types of aberrations induced by lenses, the theory of colour and understand the principles of photometry.</p> <p>Describe the superposition, scattering and polarization of light.</p> <p>Classify Diffraction</p> <p>Evaluate the quality of optical systems</p>
Optometry 1 Practical	OPP00Y2	100%	0%	6	8	<p>The primary purpose of this module is to obtain adequate practical skills to be competent in performing a comprehensive refraction and have the ability to analyse the results to manage general patients.</p>	<p>The learner should be able to:</p> <p>conduct a comprehensive case history</p> <p>perform preliminary tests</p> <p>perform retinoscopy</p>

							<p>Perform an accurate subjective refraction.</p> <p>Perform a comprehensive visual examination in the correct sequence and compare it to the expected norms.</p> <p>Perform additional procedures inclusive of ophthalmoscopy</p>
Optometry 1 Theory	OPT00Y2	100%	0%	6	8	<p>The purpose of this module is to provide basic understanding and teach fundamental concepts of</p> <p>The optical properties of the eye, including refractive conditions</p> <p>Visual function and its analysis</p> <p>Diagnostic instruments and their uses</p> <p>The performing of a basic refraction, including a good flow</p> <p>In addition to the subject content, the purpose should also be to:</p> <p>Instil disciplined and structured clinical practices</p> <p>Develop the ability to effectively communicate in the field of Optometry</p> <p>Develop the ability to identify problems</p>	<p>At the end of this module you should be able to do the following:</p> <p>Define and explain the basic terms of visual function</p> <p>Diagram and perform calculations for the Gullstrand I, II and Reduced Eyes</p> <p>With regard to Visual Acuity:</p> <p>Describe the types and perform calculations</p> <p>Describe and apply the rules governing the Snellen Chart</p> <p>Describe the factors affecting Visual Acuity and apply them to cases</p> <p>Explain the different objective methods of testing Visual Acuity</p> <p>With regard to Contrast Sensitivity</p> <p>Describe the basic uses, testing procedure and contrast sensitivity function</p> <p>With regard to Emmetropia and Spherical Ametropia</p> <p>Describe and interpret the causes, signs and symptoms, and classification of Myopia</p>

						<p>Describe and interpret the causes, signs and symptoms, and classification of Hyperopia</p> <p>Describe the type of magnification, perform calculations and apply to specific cases</p> <p>Describe and perform the tests to perform a basic refraction</p> <p>6With regards to Astigmatism</p> <p>Describe and interpret the classification and types of astigmatism</p> <p>Describe and perform the tests for Regular Astigmatism</p> <p>With regard to Accommodation</p> <p>Describe and interpret the changes, mechanism, stimulus, reaction time, range, anomalies and convergence links of accommodation</p> <p>Describe and perform the different accommodative tests</p> <p>With regards to Presbyopia</p> <p>Describe and interpret the features, signs and symptoms of presbyopia</p> <p>Describe and perform the tests to measure the near point lens</p> <p>With regard to Eye movements</p> <p>Describe the laws of Innervation</p> <p>Describe and perform the tests to measure the near point lens</p>
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							<p>Describe and diagram the positions of gaze and motility</p> <p>Describe and interpret the terminology applying to Heterophoria and Strabismus</p> <p>Describe and perform the tests to measure the near point of convergence</p> <p>Describe and perform the tests to measure Heterophorias as well as apply to case studies</p> <p>Describe and perform the tests to measure Ductions as well as apply to case studies</p> <p>Describe the concepts of SILO, AC/A Ratio and CA/C ratios</p> <p>Describe the criteria for Binocular Stability</p> <p>With regard to Colour Vision</p> <p>Describe the different colour vision theories, systems and colour labels</p> <p>Describe the different hereditary and acquired anomalies of colour vision</p> <p>Explain the different methods of testing Colour Vision</p>
Optometry 2 Practical	OPP00Y3	100%	0%	6	10	<p>The primary purpose of this module is to obtain adequate practical skills to be competent in performing a comprehensive refraction and have the ability to analyse the results to manage general patients.</p>	<p>The learner should be able to:</p> <p>Perform an accurate subjective and objective refraction.</p> <p>Perform a comprehensive visual examination in the correct sequence and compare it to the expected norms.</p> <p>Perform additional</p>

							procedures inclusive of near retinoscopy techniques, and binocular balancing techniques
Optometry 2 Theory	OPT00Y3	100%	0%	6	10	The primary purpose of this module is to obtain adequate knowledge to be competent to perform a comprehensive refraction and have the ability to analyse the results in order to manage general patients.	<p>The learner will be able to:</p> <p>Explain all the monocular, binocular and balancing refraction techniques, including ocular health inspection and be able to interpret the results.</p> <p>Interpret the static &amp; dynamic methods of retinoscopy.</p> <p>Describe the components of accommodation.</p> <p>Define the components of vergence and be able to diagnose a patient where anomalies exist.</p> <p>Discuss heterophoria accurately and use the information obtained to diagnose specific binocular dysfunctions.</p> <p>Diagnose some causes of ocular discomfort and derive a treatment plan accordingly.</p> <p>Derive a diagnosis and management plan for a patient with visual problems.</p>
Optometry 3 Research Methods	OPP00Y4	100%	0%	8	10	The purpose of these two modules is to assist students in developing theoretical, clinical and practical, and technological competencies in basic and advanced optometric diagnostic methodologies necessary to	<p>After these two modules of Optometry 3 you should be able to do the following:</p> <p>Collect, define and analyse the results of optometric data collection methodologies involving and relating to ocular, vision and other neuro-optometric disorders</p>

					<p>effectively assess general, ocular and visual health. The modules also assist in understanding the physiological and neurological basis for vision in the areas of vision science and neuro-optometry. The modules also concern the clinical management of eye and vision disorders, and optometric and vision research methodologies in relation to theoretical research into the science of vision and optometry. The modules further enable students to develop experimental and practical competencies in optometric and vision research methodologies.</p> <p>Various educational procedures are used to teach and encourage learning such as:</p> <p>Formal lectures are the core component of the teaching and learning strategy, students are encouraged to participate in lectures via debate, questions and discussions, case reports are included, and students also present their own ideas via case presentations and</p>	<p>Consolidate and integrate theoretical and practical concepts concerning the measurement of vision and the eye</p> <p>Apply modern theories and technological approaches to the measurement and management of the eye, vision and its disorders</p> <p>Communicate effectively, in individual and group contexts, your understanding of basic and advanced measurement of the eye and vision</p> <p>Communicate the theory and management of eye and vision disorders, and your understanding of modern optometric research methodologies</p> <p>Consolidate and integrate theoretical and practical concepts concerning the physiology and neurological basis of eye and vision disorders and develop appropriate approaches to the theory and management of such disorders</p> <p>Consolidate and integrate theoretical and practical concepts involving research methodologies in optometry and vision science</p> <p>Apply appropriate multivariate statistical and mathematical theories to research into vision and its disorders and demonstrate</p>
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						<p>a review of a recent article of interest published in the scientific literature. Students in small groups undertake an original research project and together prepare a research proposal and also article according to publication guidelines and standards which are evaluated and that contributes towards their cumulative mark (CM) for the year for the module concerned. Clinic attendance is necessary for all students, and they also attend tutorial/ practical sessions where clinical and other procedures are performed or involved. Students are required to do a certain amount of self-study relating to pertinent topics.</p>	<p>appropriate approaches to the development of underlying theoretical understanding and modern research approaches in optometry and vision science</p>
Optometry 3 Theory	OPT00Y4	100%	0%	8	10	<p>The purpose of these two modules is to assist students in developing theoretical, clinical and practical, and technological competencies in basic and advanced optometric diagnostic methodologies necessary to effectively assess general, ocular and visual health. The modules also assist in understanding the physiological and neurological basis</p>	<p>After these two modules of Optometry 3 you should be able to do the following:</p> <p>Collect, define and analyse the results of optometric data collection methodologies involving and relating to ocular, vision and other neuro-optometric disorders</p> <p>Consolidate and integrate theoretical and practical concepts concerning the measurement of vision and the eye</p> <p>Apply modern theories and technological</p>



					<p>for vision in the areas of vision science and neuro-optometry. The modules also concern the clinical management of eye and vision disorders, and optometric and vision research methodologies in relation to theoretical research into the science of vision and optometry. The modules further enable students to develop experimental and practical competencies in optometric and vision research methodologies.</p> <p>Various educational procedures are used to teach and encourage learning such as:</p> <p>Formal lectures are the core component of the teaching and learning strategy, students are encouraged to participate in lectures via debate, questions and discussions, case reports are included, and students also present their own ideas via case presentations and a review of a recent article of interest published in the scientific literature. Students in small groups undertake an original research project</p>	<p>approaches to the measurement and management of the eye, vision and its disorders</p> <p>Communicate effectively, in individual and group contexts, your understanding of basic and advanced measurement of the eye and vision</p> <p>Communicate the theory and management of eye and vision disorders, and your understanding of modern optometric research methodologies</p> <p>Consolidate and integrate theoretical and practical concepts concerning the physiology and neurological basis of eye and vision disorders and develop appropriate approaches to the theory and management of such disorders</p> <p>Consolidate and integrate theoretical and practical concepts involving research methodologies in optometry and vision science</p> <p>Apply appropriate multivariate statistical and mathematical theories to research into vision and its disorders and demonstrate appropriate approaches to the development of underlying theoretical understanding and modern research approaches in</p>
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						and together prepare a research proposal and also article according to publication guidelines and standards which are evaluated and that contributes towards their cumulative mark (CM) for the year for the module concerned. Clinic attendance is necessary for all students, and they also attend tutorial/ practical sessions where clinical and other procedures are performed or involved. Students are required to do a certain amount of self-study relating to pertinent topics.	optometry and vision science
Paediatric Optometry 1	PED00Y3	100%	0%	6	14	The primary purpose of this module is to provide the student with adequate skills to be competent to perform a comprehensive refraction on a paediatric patient. It furthermore builds general knowledge about a child's physical (motor and sensory) and emotional development to enable the student to have insight into the problems the paediatric patient may experience. Finally, this course establishes a basic knowledge about the crucial issues when testing children to give the patient the best possible	<p>The learner must be able to</p> <p>Discuss the basic order of development and identify the various developmental stages of the unborn child.</p> <p>To discuss the various prenatal, perinatal and postnatal stages, including influencing factors</p> <p>To describe pertinent matters of development, including primitive, nutrition and developmental theories and to understand the influence they may have on the development</p> <p>To define the visual and refractive status development of the child, to identify factors that may influence the development and to</p>

						treatment or advice.	<p>assess the various systems based upon:</p> <p>To describe a comprehensive visual examination relevant to each developmental stage, such as babies, young children, and school-going children</p> <p>List areas investigated during a typical Optometric perceptual analysis.</p> <p>Know and describe various examination procedures designed to assess perceptual skills.</p>
Paediatric Optometry 2	PED00Y4	100%	0%	8	16	<p>The purpose of the module Paediatric Optometry 2 is to facilitate an understanding of normal and abnormal development of visual and perceptual skills in children, assessment of various visual skills and management of the deficits in both visual and perceptual skills as well as in other related areas</p>	<p>At the end of the module Paediatric Optometry 2 you should be able to do the following:</p> <p>Describe the developmental history and milestones of the child.</p> <p>Describe how vision develops and the impact of delayed vision development on the functioning of the child.</p> <p>Understand the range and perform visual perceptual tests on preschool- and school-going children and be able to refer to the appropriate specialist when problems are identified.</p> <p>Examine children accurately and efficiently by adapting the standard optometric examination and specialized techniques to obtain relevant information.</p> <p>Analyse, evaluate, and translate the information gathered</p>

							<p>during examination into recommendations that correctly address the parent/patient chief concerns and other problems identified.</p> <p>Devise a sound treatment and management plan by integrating and applying their knowledge for both visual (refractive and efficiency) and perceptual (information processing) disorders</p> <p>Interact with children in a way that reflects the examiners' knowledge of cognitive development and ability of the child.</p> <p>Be able to converse intelligently, by making use of well-formed arguments, regarding aspects of learning disabilities and associated fields with other professionals.</p> <p>Be knowledgeable regarding systemic, genetic, and other paediatric health care problems to critically analyse and interpret presenting cases.</p>
Physics 1C	PHY1CA1	50%	50%	5	15	<p>The purpose of this module is to provide factual knowledge of definitions, methods, principles in Physics and broad background knowledge of basic Physics to aid in the understanding and interpretation of future scientific and technological developments.</p>	<p>On completion of this module, the student should be able to:</p> <p>Compute scientifically and convert units in the decimal system</p> <p>Manipulate vector quantities, describe and solve problems on motion in a straight line with constant acceleration</p> <p>Comprehend basic principles and laws of mechanics, so you are able to formulate, discuss and apply Newton's laws to</p>

							<p>objects moving in a straight line with and without friction.</p> <p>Define work, energy and momentum and solve problems</p> <p>Formulate fluid mechanics laws and explain the concepts in hydrostatics and apply these concepts to stationary and non-stationary fluids</p> <p>Discuss and explain the effects of heat transfer such as expansion of solids and liquids and apply the law of conservation of heat in problem solving</p> <p>Define the concept and formulate the laws encountered in direct current electricity and solve problems</p>
Physics 1D	PHY1DB1	50%	50%	5	15	<p>The purpose of this module is to provide students with a solid background in basic physics and its principles in order to aid them in their understanding and interpretation of future scientific and technological developments.</p>	<p>On completion of this module, the student should be able to:</p> <p>Define the concept and formulate the laws encountered in direct current electricity and solve problems</p> <p>Define and explain the concepts of wave fronts and rays</p> <p>Explain the law of reflection.</p> <p>Distinguish between regular and diffuse reflection.</p> <p>Explain refraction in terms of Snell's law and the index of refraction and give examples of refractive phenomena.</p> <p>Describe total internal reflection and</p>

							<p>understand fiber-optic applications.</p> <p>Explain dispersion and some of its effects.</p> <p>Understand how images are formed and describe the characteristics of images formed by plane mirrors.</p> <p>Distinguish between converging and diverging spherical mirrors.</p> <p>Determine image characteristics from ray diagrams and spherical mirror equation.</p> <p>Distinguish between converging and diverging lenses and describe images and their characteristics.</p> <p>•Find image locations and characteristics by using ray diagrams and the thin-lens equation.</p> <p>Describe the lens maker's equation and explain how its application differs from that of the thin-lens equation.</p> <p>Understand lens power in diopters.</p> <p>Explain how Young's experiment demonstrated the wave nature of light.</p> <p>Compute the wavelength of light from experimental results.</p> <p>Describe how thin films can produce colorful displays and give some examples of practical applications of thin-film interference.</p> <p>Discuss scattering and explain why the sky is</p>
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							<p>blue and sunsets are red.</p> <p>Distinguish the various units of heat.</p> <p>Define the mechanical equivalent of heat</p> <p>Define specific heat</p> <p>Explain how the specific heats of materials are measured using the technique of calorimetry.</p> <p>Compare and contrast the three common phases of matter</p> <p>Relate latent heat to phase changes.</p> <p>Describe methods of heat transfer and give practical and or environmental examples of each.</p> <p>Explain how a temperature scale is constructed.</p> <p>Convert temperatures from one scale to another.</p> <p>Describe the ideal gas law and explain how it is used to determine absolute zero.</p> <p>Understand the Kelvin temperature scale.</p> <p>Understand and be able to calculate the thermal expansions of solids and liquids.</p> <p>Relate kinetic theory and temperature.</p> <p>Relate kinetic theory and temperature.</p> <p>State the First Law of thermodynamics</p> <p>State the Second Law of thermodynamics</p>
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							<p>Explain entropy</p> <p>Explain the nuclear structure and nuclear properties</p> <p>Understand nuclear processes</p> <p>Be able to compute binding nuclear energies</p> <p>Be able to distinguish between the different types of radiation</p> <p>Be able to explain how nuclear radiation affects particularly biological matter</p>
Psychology 1A	PSY1AA1	50%	50%	6	15	<p>Psychology 1A introduces students to the fundamentals of psychology. The module is aimed at providing students with a broad theoretical foundation for further studies in psychology. To this end students encounter topics that encompass three interrelated explanatory approaches, namely biological, e.g. the role of the brain in human behaviour; psychological, e.g. cognition, motivation, and emotion; and environmental explanations, e.g. socio-cultural influences.</p>	<p>Upon completion of this module students should be able to:</p> <p>explain the nature and origins of psychology and critically differentiate between the major perspectives associated with the field of psychology;</p> <p>describe the nature of scientific psychology, including ethical issues, and be able to differentiate between major research strategies;</p> <p>discuss the role of the nervous system in human functioning;</p> <p>describe the processes of sensation and perception and evaluate the role of these processes in everyday functioning.</p> <p>differentiate between various states of consciousness and the implications of these states for human functioning.</p> <p>distinguish between classical, operant, and observational learning and describe various</p>



							processes associated with each; explain various processes and models underlying human memory and evaluate the importance of each; discuss core issues related to human motivation and evaluate various theories of emotions, including the interplay between motivation and emotion.
Psychology 1B	PSY1BB1	50%	50%	6	15	Psychology 1B introduces students to major fields in psychology. The module is aimed at providing students with an introduction to four defining fields in contemporary psychology, namely developmental psychology, personality psychology and social psychology. Familiarity with the major concepts and issues related to each of these fields should enable students to engage with these fields at an advanced level in further studies.	<p>Upon completion of this module students should be able to:</p> <p>explain and critically evaluate various issues, theories, and concepts in Developmental Psychology;</p> <p>explain and critically evaluate various issues, theories, and concepts in Personality Psychology;</p> <p>explain and critically evaluate various issues, theories, and concepts in Social Psychology;</p> <p>explain and critically evaluate various issues, theories, and concepts in Health Psychology;</p> <p>explain and critically evaluate various issues, theories, and concepts in Psychopathology.</p>
Statistical Methods 1A	SMT01A1	50%	50%	5	8	To provide the student with a perspective of the basics of probability theory and to illustrate its application to the solution of practical problems. The	<p>On completion of this learning event, the student should be able to:</p> <p>Distinguish between different measurement scales.</p>

						<p>student will also be given a basic perspective of a variety of discrete probability distributions and will be able to apply them to solve problems in various fields of application.</p>	<p>Tabulate data and derive information from frequency distributions.</p> <p>Derive and interpret information from graphical representations of data.</p> <p>Describe a data set numerically in terms of location and spread.</p> <p>Apply various elementary principles of probability theory.</p> <p>Use the standardized normal distribution table to find probabilities.</p> <p>Apply elementary principles of the sampling distribution of the mean.</p> <p>Perform hypothesis testing.</p> <p>Measure and model linear relationships between two variables.</p>
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**BACHELOR OF HEALTH SCIENCES IN PODIATRY (B9P01Q)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
Anatomy and Physiology	ANTPHY 1	100%	0%	5	36	To enable students to gain an integrated understanding of anatomy, physiology and pathophysiology from the cellular level to the level of whole-body systems. It will provide a foundation in key scientific principles applicable to the human condition such as the introductory pharmacology and pathology and medicine.	<ul style="list-style-type: none"> <li>•Explain the chemical, cellular and tissue level of organisation of the body and the structure and function of the cell.</li> <li>•Describe the anatomy, physiology, and pathology of the body across the</li> <li>•Brain, Integumentary, Skeletal, Nervous, Cardiovascular (including blood, blood vessels and lymphatic system), Respiratory, Endocrine, Renal, Gastrointestinal (including nutrition), Urinary and Reproductive</li> <li>•Systems.</li> <li>•Explain the cellular, tissue and systems responses to disease including cell death, inflammation, neoplasia, hypertrophy, hyperplasia, tissue responses to injury and repair.</li> </ul>
Applied Pharmacology	APPHSY 4	100%	0%	8	10	Equip students with necessary knowledge, skills, attitudes, and insights required to make safe and effective prescription and use of medications in the management of podiatric related illness and or injury. Also, to equip students with insight and skills to be able to both understand and	<ul style="list-style-type: none"> <li>•Demonstrate an in-depth knowledge of Pharmacokinetics and Pharmacodynamics and the implications of drug absorption, drug clearance, volume of distribution and half-life and the significance in patient management.</li> <li>•Discuss the implications of infection, the role of drug therapy and the concept of antibiotic resistance.</li> <li>•Describe and</li> </ul>

						be able to deal with possible drug interactions.	<p>discuss the importance and complications of NSAID's and analgesic prescription with specific relevance to podiatry.</p> <ul style="list-style-type: none"> <li>•Describe the principles of local anaesthesia use in podiatry with specific emphasis on safe and effective administration of local anaesthesia in a clinical setting.</li> <li>•Describe and explain the mechanism of Local Anaesthetic.</li> <li>•Demonstrate the ability to formulate appropriate goal orientated pharmaceutical management plans for common podiatric conditions taking into consideration other medications the patient may be on. (E.g. for RA, Diabetes, HIV/AIDS, TB, HT, Mental conditions etc.)</li> <li>•Demonstrated an understanding of poly-pharmacy and its effects and restrictions on podiatric practice.</li> <li>•Demonstrated an understanding of both moral and medico-legal aspects of administration of drugs to patients</li> </ul>
Basic Science: Chemistry	CHB1BB1	50%	50%	5	6	<p>Units 1 - 4: Introductory concepts, bonding, and naming</p> <p>These are introductory units that investigate the microscopic components of matter and explain how to link them to both the macroscopic properties of matter and the</p>	<p>Equip students with chemistry learning outcomes applicable in several other areas in the degree; for example, pharmacology, physiology and applied pharmacology.</p>

					<p>periodic table. Types of bonding are also discussed along with the conventions for naming inorganic compounds.</p> <p>Units 5 – 6: Balancing equations and chemical calculations - Stoichiometry</p> <p>These units deal with chemical formulas, balancing equations and associated chemical calculations. The concepts of percent composition, empirical formulas, mole to mass to atom conversions and calculations involving balanced equations (stoichiometry) are introduced and strategies used to solve them are presented and applied.</p> <p>Unit 7: Gases</p> <p>This unit provides students with information about the properties and uses of the types of gases used in the emergency medical care field.</p> <p>Unit 8: Water, aqueous solutions, acids and bases and pH</p> <p>This unit gives a theoretical overview of water and its associated properties. Factors affecting solubility,</p>	
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						<p>different types of solutions, osmosis, and acids and bases are dealt with, and the concepts of pH and buffers are introduced.</p> <p>Unit 9: Organic Chemistry</p> <p>This unit deals with organic chemistry and it introduces organic chemistry dealing with the physical and chemical properties of the most common organic compounds including compounds like alcohols, ketones, organic acids, and carbohydrates, lipids, and proteins.</p> <p>Unit 10: Radioactivity</p> <p>This unit identifies the different types of radioactivity and explains the dangers and precautions associated with them.</p>	
Basic Science: Physics	PHB1AA1	50%	50%	5	6	<p>This module is presented in accordance with the following sections:</p> <p>1.Units and the decimal system:</p> <ul style="list-style-type: none"> <li>•The decimal system and scientific notation.</li> <li>•Units and conversion of units.</li> </ul> <p>2.Mechanics:</p> <ul style="list-style-type: none"> <li>•Vectors in two dimensions.</li> <li>•Dynamics: Equations of motion for uniform motion.</li> </ul>	Equip students with learning outcomes applicable in several other areas in the degree; for example, the concepts of motion, forces and mechanical advantage are applicable to the biomechanics and human gait understanding.

						<ul style="list-style-type: none"> <li>•Newton's laws applied to uniform motion on frictionless surfaces.</li> <li>•Work, momentum, energy and power.</li> <li>•Simple machines.</li> </ul> <p>3.Hydrostatics:</p> <ul style="list-style-type: none"> <li>•Density and relative density.</li> <li>•Archimedes' principle.</li> <li>•Pressure in static fluids.</li> <li>•Gas laws.</li> </ul> <p>4.Heat transferring processes:</p> <ul style="list-style-type: none"> <li>•Conduction, convection and radiation</li> </ul>	
Clinical Practice 1 (Practice)	CLPPHY1	100%	0%	5	20	<p>Introduces the students to the practical examinations, basic skills in patient interaction, assessment as well as to the equipment important in managing a patient. It further introduces and equip the students with the ability to handle documents and files relating to clinical work.</p>	<ul style="list-style-type: none"> <li>•Elicit a basic history and make basic notes from patient interview</li> <li>•Demonstrate professional, ethical patient interaction with patients and colleagues</li> <li>•Conduct a basic assessment of a patient</li> <li>•Demonstrate and perform basic assessment &amp; treatment techniques on a patient</li> <li>•Demonstrate basic knowledge of medical equipment used by podiatrist</li> <li>•Identify common podiatric complaints</li> </ul>
Clinical Practice 2 (Practice)	CLPPHY2	100%	0%	5	16	<p>The purpose of this module is to equip the student with the ability to utilize their clinical skills in taking a clinical history, diagnose, examine including the use of special instruments and accurately manage all lower limb pathologies</p>	<ul style="list-style-type: none"> <li>•Demonstrate competency in the following clinical skills: assessing a patient's blood pressure, examine joint ranges of the foot &amp; lower limb and to assess structures in and around the joints, assess muscle strength and musculature of each muscle group of each muscle compartment</li> </ul>

							of the lower limb and assess the neurological & vascular status of a patient. •Demonstrate ability to: undertake a basic gait cycle & biomechanical examination, discuss laboratory tests utilized in podiatric investigations, interpret x-rays presented, and refer patients for radiographic examinations.
Clinical Practice 2 (Theory)	CLPTHY2	100%	0%	5	16	The purpose of this module is to equip the student with the theoretical knowledge/ clinical skills in taking a clinical history, diagnose, examine including the use of special instruments and accurately manage all lower limb pathologies	Discuss and describe how and why to perform the following clinical skills: assessing a patient's blood pressure, examine joint ranges of the foot & lower limb and to assess structures in and around the joints, assess muscle strength and musculature of each muscle group of each muscle compartment of the lower limb and assess the neurological & vascular status of a patient.
Clinical Practice 3 (Practice)	CLPPHY3	100%	0%	6	18	Equips the student by bringing together all the relevant theoretical knowledge learned, and practical clinical skills from attending a wide variety of clinics both on and off campus where students are given responsibility to diagnose, and comprehensively manage both localized and systemic pathologies as they manifest on the lower limb, by means of	Students can demonstrate integration of theory and practice in: Logical clinical history-taking The appropriate examination of the patient. The appropriate management of a patient. A patient file is comprehensively documented and correctly charted. •Patients are appropriately referred •Complete clinical skills with precision as detailed in the Skills assessment sheets •Clear and concise decision-making



						invasive surgery, pharmacotherapeutics, and by prescription of specialised devices such as orthoses, innersoles and padding. The module provides relevant practical clinical skills in Podiatric Biomechanics, Radiology, Physical examination of a patient, and introduction to advanced Orthotic therapy in the management of foot and lower limb pathologies.	skills demonstrated for the prescription of orthotic devices •Skilful manufacture of orthotic devices
Clinical Practice 3 (Theory)	CLPTHY3	100%	0%	6	18	Clinical Studies III provides the student with the ability to apply podiatric medicine principles in various clinical situations by using logic in explaining the resulting pathologies. The module also provides relevant theoretical knowledge and practical clinical skills in Podiatric Biomechanics, Diagnostic, Radiology, Physical examination of a patient, and introduction to advanced Orthotic therapy in the management of foot and lower limb pathologies.	<ul style="list-style-type: none"> <li>•Name and describe in detail all the necessary examinations that a patient may require.</li> <li>•Demonstrate an understanding of the different biomechanical principles and the role of biomechanics in the assessment and management of podiatric conditions.</li> <li>•Explain the mechanics of foot function and relate anomalies to abnormal foot function and pathology.</li> <li>•Institute and discuss the management of abnormal foot function using the various mechanical devices discussed.</li> <li>•Demonstrate an understanding of radiological modalities and be able to interpret and write a concise report on the image presented.</li> <li>•Be able to structure/design comprehensive podiatric</li> </ul>

							management strategy for high-risk patients. •Identify and describe the presentations of various dermatological conditions on the foot and lower limb and describe and discuss appropriate podiatric/ medical management of such conditions.
Clinical Practice 4 (Practical)	CLPHSY4	100%	0%	8	22	This practical module aims to provide a transitional role by fully preparing students for independent clinical practice on its completion.	•Demonstrate competency in the performance of routine and specialised podiatric skills in order to competently assess, diagnose, treat and manage conditions and/or pathology affecting the foot and lower limb.
Clinical Practice 4 (Theory)	CLPTHY4	100%	0%	8	20	The Clinical Practice IV module aims to provide the framework for the full integration of the academic components of the programme with the advancing skills and knowledge reflective of the NQF level 8 students during the final clinical practice component.	•Demonstrate ability to integrate relevant underlying theoretical knowledge learned, evidence and practical clinical skills in a wide variety of clinical settings both on and off campus where students are given responsibility to diagnose, and comprehensively manage both localized and systemic pathologies as they manifest on the lower limb, by means of invasive surgery, pharmacotherapeutics, and by prescription of specialised devices such as orthoses, innersoles and padding.
Health Management Systems	HMSPHB4	100%	0%	8	10	Introduce students to health management systems and an introduction to public health management structures.	Demonstrate ability to ethically manage a clinical practice in all sectors of the community within the health care environment. Competently align and reflect on factors that might affect clinical decision making and is

							cognisant of relevant legislation governing healthcare in RSA.
Human Sciences	HUMSHY1	50%	50%	5	20	<p>The following sections are covered in this module:</p> <ul style="list-style-type: none"> <li>• Perception</li> <li>• Learning</li> <li>• Memory</li> <li>• Intelligence</li> <li>• Motivation &amp; emotions</li> <li>• Altered states of consciousness</li> <li>• Psychopathology</li> <li>• Human development</li> <li>• Personality theories</li> <li>• Social psychology</li> <li>• Therapeutic communication</li> <li>• Self-awareness</li> <li>• Introduction to Sociology</li> <li>• Health and healthcare</li> <li>• Gender and feminism</li> <li>• Family/ culture and ethnicity</li> <li>• Death &amp; bereavement</li> </ul>	At the end of the module students understand individual human behaviour and group dynamics. The module makes it possible for students to detect psychopathology and make appropriate referrals.
Introduction to Pharmacology	INTPHY3	100%	0%	6	12	<p>The Pharmacology module introduces the principles of pharmacology and how generic groups of medications may interact with and affect human physiology. This subject requires students to link their understanding of physiology, pathophysiology and podiatric medicine to the prescription and administration of medications. Issues such as the legal requirements surrounding the procurement,</p>	<p>At the end of this module students are expected to:</p> <ul style="list-style-type: none"> <li>• Describe scope of modern pharmacology including small molecule based therapies, protein based therapies (biopharmaceuticals), stem cell based therapies, gene based therapies</li> <li>• Explain the purpose and guidelines of drug schedules and legislation.</li> <li>• Discuss the role of the legislating bodies with regards to pharmacology.</li> <li>• Provide insight into prescribing medicine (Section 22C licence) with regards to</li> </ul>

						use, and storage of medications are also covered. Each of the medications that are commonly prescribed and / or administered by podiatrists is dealt with in significant detail.	<p>Section 22 of the Medicines and Related Substances Act, 1965 (Act 101 of 1965).</p> <ul style="list-style-type: none"> <li>• Discuss the factors that affect the shelf life of drugs and relate this to storage.</li> <li>• Describe different types of drug interactions and provide examples of medications that result in drug interactions</li> <li>• Discuss different types of drug dependence and provide examples of medications that cause dependence</li> <li>• Write a script</li> <li>• Discuss prescribing in special populations (pregnant women, children and elderly)</li> <li>• Discuss management of common toxic syndromes associated with major drug groups</li> <li>• Discuss the role pharmacoeconomics plays in treatment options</li> </ul>
Medical Sciences	MEDSHY1	100%	0%	6	12	This module will provide a basic yet broad foundation in the sciences that underpin the practice of Health Care Sciences.	It enables students to gain an introductory understanding of key biological concepts such as immunology, epidemiology, and microbiology.
Pathology and Medicine	PATMHY3	100%	0%	6	24	The purpose of this module is introduce the learner to the aetiologies, signs and symptoms, assessment and management systemic conditions	Recognise and appraise systemic conditions and the signs and symptoms that impact on the foot and lower-limb for the purpose of treatment, referral and subsequent management.
Physiology 2	PHYGHY2	100%	0%	6	24	Purpose of this module is that the learner understands the physiological mechanisms of	Students understands the physiological processes of the disease and can appreciate the

						the nervous system, reproductive system, cardiovascular/circulatory system, lymphatic system, respiratory system. This will enable the student a better understanding as to why certain pathologies occur in the lower limb.	difference between healthy and diseased physiological functions.
Pod Med: 4 Podogeriatrics	PDMGHY4	100%	0%	8	10	Purpose of this module is that the learner understands the physiological mechanisms of the nervous system, reproductive system, circulatory system, lymphatic system, respiratory system. This will enable to give the student a better understanding as to why certain pathologies to occur in the lower limb. The student will also have the ability to see the whole body as whole and not just focus on the limbs.	<ul style="list-style-type: none"> <li>Describe the structure and the functions of the integumentary system and its associated appendages</li> <li>Describe the physiological mechanisms involved in movement</li> <li>Explain the physiological mechanisms of communication, integration and control of the nervous system</li> <li>Relate the structures and functions of the endocrine glands and reproductive organs to their functions</li> <li>Describe the anatomy and physiology of the circulatory system.</li> <li>Describe the structure and function of the immune system, highlighting the role of the lymphatic system.</li> <li>Describe the anatomy and physiology of the respiratory system.</li> <li>Describe the anatomy and physiology of the urinary system.</li> </ul>
Pod Med: Podopaediatrics	PDMPHY4	100%	0%	8	10	Podopaediatrics aims to equip students with knowledge and ability to identify,	Demonstrate competency in the performance of routine and specialised podiatric

						diagnose, and comprehensively manage both localized and systemic pathologies as they manifest on the lower limb in a paediatric patient.	skills in order to clinically assess, diagnose, treat and manage conditions and/or pathology affecting the foot and lower limb in paediatric patients.
Pod Med: Sports Medicine	PDMSHY4	100%	0%	8	10	Sports Medicine introduces students to the field of sports medicine and equips them with knowledge and ability to identify, diagnose, and comprehensively manage both localized and systemic pathologies as they manifest on the lower limb in a sports patient.	Demonstrate competency in the performance of routine and specialised podiatric skills in order to clinically assess, diagnose, treat and manage conditions and/or pathology affecting the foot and lower limb sport patients/ patients presenting with sports related pathologies.
Podiatric Anatomy 2 (Practical)	PDAPHA 2	100%	0%	5	8	This module helps students to gain the relevant practical and functional lower limb anatomical background applicable to Podiatry.	Identify, describe the Surface anatomy and landmarks; Skeletal anatomy; Muscular anatomy; Cardiovascular anatomy; Neural anatomy as these relates to the foot and lower limbs.
Podiatric Anatomy 2 (Theory)	PDATHA 2	100%	0%	5	8	This module aims to enable students to gain the relevant theoretical lower limb anatomical background applicable to Podiatry	Discuss and provide clinical podiatric significance of Surface anatomy and landmarks; Skeletal anatomy; Muscular anatomy; Cardiovascular anatomy; Neural anatomy.
Podiatric Medicine 1 (Theory)	PDMTHY 1	100%	0%	6	24	The primary purpose of this module is to introduce you to the field of Podiatric Medicine. This will be achieved by introducing students to basic local and systemic disorders affecting the foot and lower limbs, basic	Discuss what is meant by ethical and professional behaviour. •Explain what a Podiatrist does and discuss their role in the health care system •Demonstrate ability to reason clinically. •Have basic knowledge of body systems, their assessments, systemic conditions

						pharmacology (Materia medica) and by equipping you with basic skills in patient interaction, assessment as well as clinical reasoning.	and their effect on the foot and lower limbs. •Knowledge of basic podiatric complaints, material medica and function of the foot.
Podiatric Medicine 2	PDMTHY 2	100%	0%	6	36	The purpose of the Podiatric Medicine II module is to introduce the student to the foot and lower limb conditions, their effect on the foot and lower limb and equips students' with the skills to identify, assess diagnose and manage these conditions.	<ul style="list-style-type: none"> <li>•Competently identify, describe, assess and manage the forefoot conditions, hindfoot conditions, and ankle, knee and hip pathologies.</li> <li>•Demonstrate, examine, and choose the appropriate techniques in padding, strapping and casting for treatment of foot and lower limb conditions.</li> <li>•Interpret, evaluate and demonstrate the clinical investigations essential for confirming the diagnosis of presenting pathologies.</li> <li>•Discuss pharmacological management of foot and lower limb conditions.</li> </ul>
Podiatric Medicine 3	PDMNHY3	100%	0%	8	32	The purpose of Podiatric Medicine III is to introduce students to foot and lower limb pathologies due to or as a complication of communicable and non-communicable systemic conditions.	<p>Systemic diseases are defined; their clinical presentation, pathological course, podiatric and medical management and manifestation in the lower limb and foot are accurately described.</p> <p>Ulcers are accurately categorised and defined with the student being able to explain precisely the various pathophysiology.</p> <ul style="list-style-type: none"> <li>•Describe or discuss an appropriate podiatric management of the conditions studied based on the general medical and pharmacological management.</li> </ul>

							<ul style="list-style-type: none"> <li>•Able to identify and demonstrate an ability to identify ethical issues in a particular scenario; and demonstrate an ability to think and write critically about ethical consideration</li> <li>•Able to differentiate between upper and lower motor neuron lesions and be able to recognize temporary, progressive and permanent neurological damage from presenting clinical features.</li> </ul>
Podiatric Orthotics 2 (Practice)	PDOPHY 2	100%	0%	6	8	This module also aims to equip students with the practical skills to confidently prescribe devices for patients with any abnormal biomechanical ailments.	Competently manufacture orthotics and design for CAD-CAM orthotic manufacture.
Podiatric Orthotics 2 (Theory)	PDOTHY 2	100%	0%	5	8	Orthotics theory aims to provide knowledge and basis for the use of external foot devices used to treat certain foot and lower limb pathologies. This module capacitates the student with necessary skills to recognize, accurately diagnosis and treat foot problems through the prescription of external foot devices.	Students should demonstrate integration of their understanding of anatomy of the foot and lower limb and podiatric medicine I and II, in prescribing and manufacturing these external foot devices.
Podiatric Surgery	PODSHY 3	100%	0%	8	12	The purpose of the Surgery module is to introduce students to surgery techniques of the foot and lower limb and to develop and enhance your understanding of	<ul style="list-style-type: none"> <li>•Students must be aware of specific procedures that patient may need and refer to appropriate specialists.</li> <li>•Demonstrate understanding of the effect of orthopaedic procedures on the lower limb and spine.</li> <li>•Discuss, describe</li> </ul>



						podiatric theory as it applies to surgical management of foot complaints	and demonstrate ability to competently perform podiatric surgical procedures.
Private Practice Management	PPMPHA 4	100%	0%	8	8	Private Practice Management aims to provide students with a clear understanding of Private practice in terms of: Starting up a business, appointment systems, recording keeping and ethical tariffs, taxation, and insurance The importance of CPD Health risks	<ul style="list-style-type: none"> <li>•Demonstrate ability to ethically manage a clinical practice in a private sector within the legislative framework.</li> <li>•Demonstrate an entrepreneurial ability.</li> </ul>
Research Methodology	REMPHY3	100%	0%	8	12	Aims to introduce the student to the concept of research and provides an important foundation for the research elective in the fourth year. This subject becomes very important for future academic progression as well as the ability to critically appraise new findings and publications in the field of podiatric medicine.	Develop research skills and be aware of methodologies for conducting research within a podiatric and health sector. Discern the role and contribution of research the development of the profession. Critically reflect on research ethics and the significance of being a lifelong learner and a reflective practitioner.
Research Project and Dissertation	REPPHY 4	100%	0%	8	30	Assist students develop critical evaluation, methods of enquiry and an extended knowledge of contemporary developments as they undertake a research project.	Conduct a research project within a podiatric context to demonstrate good design technique, initiative, original thinking, and analytical skills.

**HIGHER CERTIFICATE IN SPORT ADMINISTRATION (F9SA1Q)**

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Communication and Computer Literacy	CCCLSAA1	100%	0%	5	5	The purpose of the module is to provide students with the foundational computer literacy and communication skills needed in the coaching domain. The course is introductory and focuses on the development of core skills.	Complete the UJ online Computer proficiency test. Apply basic computer skills using the UJ Learning Management system / MSWord, Excel and PowerPoint for communication with parents, sponsors, sport administrators and the media. Use effective communication with with parents, sponsors, sport administrators and the media Identify Cyber issues Address common communication issues with stakeholders such as parents, sponsors, sport administrators and the media are clearly discussed. The major communication problems common to the coaching profession are accurately identified and addressed
First Aid Level 1	FALSAB1	100%	0%	5	5	Students will be required to complete an accredited Level 1 First Aid course. The Certificate of Completion is to be submitted prior to the completion of the	The successful student will be able to identify, describe and appropriately manage the following: Generic principles of first aid Common infectious diseases

						programme.	Generic actions in an emergency situation Trauma, injuries and multiple casualty incidents Patient assessment and history taking Asphyxia Drowning and near-drowning Shock Unconsciousness Brain disorders Cardiac disorders Burns Poisoning, bites and stings Environmental conditions Pregnancy and emergency childbirth
Financial Administration in Sport	FASSAB1	100%	0%	5	10	This module deals with financial management in sport and addresses issues such as budgets, financial planning in sport, and basic accounting with reference to the sport industry. This module aims to provide students with the intellectual competencies in the acquisition, analysis, interpretation and application of basic accounting concepts, such as budgeting, financial planning, and financial statement analysis. Learners will be guided in terms of application as well as assessment of the principles, disciplines and	Distinguish between three different types of companies. Explain the various purpose of financial statements and the different users. Distinguish between industry comparative analysis and time-series analysis. What is the difference between fixed costs and variable costs? Distinguish between future value and present value. Explain the discounted cash flow techniques. Explain accounting as a system. Classify different items as noncurrent asset; current asset; noncurrent liability; current liability; owner's equity; income and or expense. Calculate VAT.

						practices of Sport Finance in a holistic context.	Distinguish between manufacturing costs and nonmanufacturing costs.
Facility, Competition and Event Administration	FCESAY1	100%	0%	5	10	The purpose of the module is to introduce the student to the principles of facility and event management in sport. Effective events and facility management requires organisational abilities, multitasking, communication skills, creativity, problem-solving, attention to detail, the ability to work to deadline and negotiation and marketing skills. Students will be introduced to the various requirements in each of the areas.	Explain accurately the key requirement for effective events and facility management; Demonstrate an understanding of the organisational activities and requirements for a successful event; Demonstrate an understanding of the skills needed to manage a sport facility or event. Develop an appropriate logistics event plan.
Human Resource Administration in a Sport Club	HRASAA1	100%	0%	5	10	The purpose of this module is to acquire the required knowledge and skills to administer the human resources of a sport club effectively. Topics covered are the human resources in sport clubs, volunteers and volunteerism, job design, staffing, recruitment, induction, appointment development and appraisal of performance of human	Identify and describe the different human resources in a sport club or recreation organisation; Gain some insight into the economic significance of volunteer organisations such as a sports clubs; distinguish between job simplification, job rotation and job enlargement; Describe the purpose and focus of job analysis, job description and job specification; define leadership and describe forms of leader

						resources.	behaviour; Discuss the process by which individuals are motivated in an organisation; define and describe values and distinguish them from attitudes and norms; explain why human resource development should take place in an organisation; define the process of performance appraisal and explain its purpose;
Introduction to Sport Marketing and Administration	IMASAA1	100%	0%	5	10	Implement the administrative component of a marketing plan of a sport club, event and competition.	Provide a definition of sport marketing. Explain why doing marketing research is important to a business. Define a target market. Explain what the marketing mix is. List what elements of the marketing mix. Define sponsorship. Explain the reasons for sponsorship. Explain the term 'Ambush Marketing'
Principles and Administration of Coaching	PACSAA1	100%	0%	5	5	The purpose of Principles and ministration of coaching in	To be able to understand and explain the principles of

						<p>Sport Administration is to provide learners with knowledge, skills and competencies to ensure professional, ethical and effective administration as well conducting of sport coaches accros various sporting codes. This module also has the purpose of teaching the students the basic skills and a way of understanding what it takes to be an excellent coach.</p>	<p>coaching. To be able to understand and explain the role of a sport coach To to acknowledge and discuss the qualities of a good coach To be informed of how to deal with a rude coach. Have gained some insight regarding the role of the basic sport science in football</p>
People with Disability in Sport	PDSSAB1	100%	0%	5	5	<p>The purpose of the module is to provide students with the basic principles of coaching athletes with disabilities. The module also introduces students to the sport code and event classification of athletes.</p>	<p>Demonstrate the ability to distinguish correctly between the different types of physical and intellectual disability and the classification thereof within a variety of sports codes. Identify correctly the key role players for disability sport at national and international level. The distinction between physical and intellectual disability is accurately identified and described. The various classifications required for athlete participation in sport are correctly differentiated and applied. National and international disability structures and</p>

							organisations in sport are correctly identified and differentiated.
Sport and Club Administration	SCASAY1	100%	0%	5	20	The purpose of the module is to introduce students to the various areas of administration of a sport club. These include distinguishing between management and administration, identify stakeholders of a local sport club, develop a process to start a community sport club, plan and develop a basic sport club constitution, develop a committee structure for a local sport club, debate the role of meetings as well as that of the members of meetings, plan the administration of equipment in a sport club as well as developing a risk plan for a local sport club.	Debate the difference between management and administration within the context of a sport/recreation club. Identify and describe the different stakeholders and their roles in a community sport or recreation club. Explain the different steps and argue each to start a sport club. Describe the role and purpose of a sport club constitution. Compile a constitution for a sport club. Explain the different positions and their roles on a sport club committee. Describe the requirements and format of an agenda of a meeting and accompanied minutes. Distinguish between the different types of sport equipment and administration thereof in a club. Discuss and apply the principles of the development of a risk plan for a sport club.
Sport Leadership and Ethics	SLESAB1	100%	0%	5	10	The purpose of the module is to demonstrate to students the leadership skills and strategies required for coaching within	Demonstrate the ability to distinguish between and select from different types of leadership styles, indicating which is

						an ethical framework. The module introduces students to a variety of leadership styles and approaches, with a view to developing an effective and proficient coach.	more effective and why. Demonstrate an understanding of the need for a personal coaching vision and the importance of a code of conduct. Demonstrate an understanding of the importance of the ethical framework within which a coach must operate.
Self-Management and Personal Skills Development	SMDSAA1	100%	0%	5	5	The purpose of the module is to develop the inter- and intra-personal skills needed for coaching within the four domains. The module provides for the development of a self-reflective approach to coaching and to coach as educator.	Demonstrate the skills needed to manage his or her time effectively; Demonstrate the techniques needed to manage communication effectively. Demonstrate an appreciation of the need for a personal coaching philosophy. Develop an appropriate coaching philosophy, and the components thereof.
Work Integrated Learning (WIL)	WILSAY1	100%	0%	5	15	The purpose of this module is to acquire the competency to apply sport administrative knowledge in practical situations effectively. Competencies relates to human resource, financial, marketing, leadership and event administration experiences in a sport club or recreation centre.	Take the minutes of a meeting correctly and that is in line with the agenda of the meeting. Describe how the sport organization plan and implement the selection and induction of a newly recruited staff member (coach, instructor). Develop a mascot as marketing instrument for a sport club/organization Explain why is budgeting important Indicate how often is the budget revised



							<p>Indicate how employee contribution and leadership is acknowledged at the club / centre. Devise a plan on how the club / centre could have a small activity to acknowledge employee contribution and leadership every month during staff meetings. Reflect on the planning and implementation referring to the aspects when planning, implementing and evaluating an event.</p>
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#### HIGHER CERTIFICATE IN SPORT COACHING & EXERCISE SCIENCES (F9SC2Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Basic Anatomy and Physiology	BAPSCY1	100%	0%	6	10	The purpose of the module is to enable the student's understanding of the basics of anatomy and physiology. This understanding will be focused on the importance of anatomy and physiology for sport and exercise.	Identify the major components of the skeletal muscular system. Demonstrate an understanding of the energy systems required for the production of movement.
Basic Coaching Science	BCSSCB1	100%	0%	5	10	Coaching science lays out the theoretical underpinnings of the work of a coach. A successful coach is able to transfer the knowledge	Conduct and implement basic fitness training protocols embedded within the principles of coaching, training and exercise.

						<p>acquired in this module into the practice of coaching to support and develop optimal performance. The purpose of this module is therefore to introduce the student to the principles of coaching science which provide the disciplinary paradigm from which all coaching proceeds.</p>	<p>Demonstrate familiarity with basic coaching methods and styles.</p> <p>Communicate coaching goals to participants.</p> <p>Demonstrate familiarity with the basic techniques needed to prepare a team.</p> <p>Demonstrate an understanding of the importance of health and safety, and fair play, for training and in competition.</p>
Basic Injury Prevention	BIPSCA1	100%	0%	5	10	<p>Injury prevention is an important part of effective coaching and is designed to prevent or reduce injuries, however caused. Injury prevention is core to the improvement of performance and the overall enjoyment of sport.</p> <p>The purpose of this module is to provide students with a basic understanding of sport injuries. The module also provides students with the core skills needed to ensure basic injury prevention.</p>	<p>Demonstrate a basic understanding of the common muscular skeletal injuries, their causes, and their prevention.</p> <p>Demonstrate the ability to prepare athletes for the various environmental and climatic conditions that impact performance.</p> <p>Demonstrate the ability to provide support to athletes so prevent injury.</p>
Communication and computer literacy	CCLSCA1	100%	0%	5	5	<p>The purpose of the module is to provide students with the</p>	<p>Complete the UJ online Computer proficiency test.</p>

						<p>foundational computer literacy and communication skills needed in the coaching domain. The course is introductory and focuses on the development of core skills.</p>	<p>Apply basic computer skills using the UJ Learning Management system / MSWord, Excel and PowerPoint for communication with parents, sponsors, sport administrators and the media.</p> <p>Use effective communication with with parents, sponsors, sport administrators and the media</p> <p>Identify Cyber issues</p> <p>Address common communication issues with stakeholders such as parents, sponsors, sport administrators and the media are clearly discussed.</p> <p>The major communication problems common to the coaching profession are accurately identified and addressed</p>
Coaching in the Four Domains	CFDSCY1	100%	0%	5	20	<p>The purpose of this module is to introduce students to the core concepts of long-term athlete development within the four domains: children, participation, talent identification, and high performance. The module provides a</p>	<p>Demonstrate an understanding of the long-term participant development (LTPD) framework.</p> <p>Demonstrate an in-depth knowledge of the four domains of coaching within the LTPD framework.</p> <p>Identify and apply relevant and appropriate coaching and sporting activities in</p>

						sound basis for performance in a variety of coaching settings.	each of the domains.
First Aid Level 1	FALSAB1	100%	0%	5	5	Students will be required to complete an accredited Level 1 First Aid course. The Certificate of Completion is to be submitted prior to the completion of the programme.	<p>The successful student will be able to identify, describe and appropriately manage the following:</p> <ul style="list-style-type: none"> <li>Generic principles of first aid</li> <li>Common infectious diseases</li> <li>Generic actions in an emergency situation</li> <li>Trauma, injuries and multiple casualty incidents</li> <li>Patient assessment and history taking</li> <li>Asphyxia</li> <li>Drowning and near-drowning</li> <li>Shock</li> <li>Unconsciousness</li> <li>Brain disorders</li> <li>Cardiac disorders</li> <li>Burns</li> <li>Poisoning, bites and stings</li> <li>Environmental conditions</li> <li>Pregnancy and emergency childbirth</li> </ul>
Facility, Competition and Event Management	FCESAY1	100%	0%	5	10	The purpose of the module is to introduce the student to the principles of facility and event management in sport. Effective events and facility management	<p>Explain accurately the key requirement for effective events and facility management;</p> <p>Demonstrate an understanding of the organisational activities and</p>

						requires organisational abilities, multitasking, communication skills, creativity, problem-solving, attention to detail, the ability to work to deadline and negotiation and marketing skills. Students will be introduced to the various requirements in each of the areas.	requirements for a successful event;  Demonstrate an understanding of the skills needed to manage a sport facility or event.  Develop an appropriate logistics event plan.
Introduction to Sport Law	ISLSAB1	100%	0%	5	10	The purpose of the module is to provide the students with a foundational understanding of the law as it applies to sport. The module canvasses the legal implications of a variety of aspects of the coaching context.	Demonstrate an understanding of the basic legal principles of the legal aspects of sport as taught  Demonstrate the ability to identify and explain the key legal aspects of the duty of care  Demonstrate the ability to identify and explain the risk factors in a coaching and sport context.
People with Disability in Sport	PDSSAB1	100%	0%	5	10	The purpose of the module is to provide students with the basic principles of coaching athletes with disabilities. The module also introduces students to the sport code and event classification of athletes.	Demonstrate the ability to distinguish correctly between the different types of physical and intellectual disability and the classification thereof within a variety of sports codes.  Identify correctly the key role players for disability sport at national and international level.  The distinction between physical

							<p>and intellectual disability is accurately identified and described.</p> <p>The various classifications required for athlete participation in sport are correctly differentiated and applied.</p> <p>National and international disability structures and organisations in sport are correctly identified and differentiated.</p>
Sport Club Administration	SCASCA1	100%	0%	5	5	<p>The purpose of the module is to introduce students to the various areas of administration of a sport club. These include distinguishing between management and administration, identify stakeholders of a local sport club, develop a process to start a community sport club, plan and develop a basic sport club constitution, develop a committee structure for a local sport club, debate the role of meetings as well as that of the members of meetings, plan the administration of equipment in a sport club as well as developing a</p>	<p>Debate the difference between management and administration within the context of a sport/recreation club.</p> <p>Identify and describe the different stakeholders and their roles in a community sport or recreation club.</p> <p>Explain the different steps and argue each to start a sport club.</p> <p>Describe the role and purpose of a sport club constitution.</p> <p>Compile a constitution for a sport club.</p> <p>Explain the different positions and their roles on a sport club committee.</p> <p>Describe the requirements and format of an</p>

						<p>risk plan for a local sport club.</p> <p>agenda of a meeting and accompanied minutes.</p> <p>Distinguish between the different types of sport equipment and administration thereof in a club.</p> <p>Discuss and apply the principles of the development of a risk plan for a sport club.</p>	
Sport Leadership and Ethics	SLESCB1	100%	0%	5	10	<p>The purpose of the module is to demonstrate to students the leadership skills and strategies required for coaching within an ethical framework. The module introduces students to a variety of leadership styles and approaches, with a view to developing an effective and proficient coach.</p> <p>Demonstrate the ability to distinguish between and select from different types of leadership styles, indicating which is more effective and why.</p> <p>Demonstrate an understanding of the need for a personal coaching vision and the importance of a code of conduct.</p> <p>Demonstrate an understanding of the importance of the ethical framework within which a coach must operate.</p>	
Self-Management and Personal Skills Development	SMDSAA1	100%	0%	5	5	<p>The purpose of the module is to develop the inter- and intra-personal skills needed for coaching within the four domains. The module provides for the development of a self-reflective approach to coaching and to coach as educator.</p> <p>Demonstrate the skills needed to manage his or her time effectively;</p> <p>Demonstrate the techniques needed to manage communication effectively.</p> <p>Demonstrate an appreciation of the need for a personal coaching philosophy.</p> <p>Develop an appropriate</p>	

							coaching philosophy, and the components thereof.
Work Integrated Learning (WIL)	WILSCY1	100%	0%	5	10	The purpose of the Work integrated learning module is to ensure that the students are provided with exposure to a sports coaching environment through participation in the work and activities of a sporting club or equivalent sporting environment.	<p>Experienced the various aspects of a Sport Coaching working environment</p> <p>Shadowed a sport coach during training times and will reflect on observations made during this time;</p> <p>Practiced basic coaching techniques alongside and under the supervision of an experienced coach.</p> <p>Assisting in a sport coaching environment is competently effected and demonstrated.</p> <p>The different areas of the sport coaching working environment are accurately identified and distinguished</p> <p>A log book demonstrating the hours shadowing a pre- approved sport-specific coach is accurately and correctly completed.</p>



## DIPLOMA IN SPORT MANAGEMENT (D9S01Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Business Management 1A	BMA01A1	50%	50%	5	12	The purpose of this module is to introduce students to the main themes and concepts of Business Management, the business environment and its interactive sub-environments. Furthermore, students will be provided with a global overview of general management as a management function and prepare them for challenges in the South African business environment. This module is designed to provide the student with intellectual competencies, practical skills and an understanding of management based on historical and modern approaches as well as the management tasks, namely planning, organising, leading and control.	Students should be able to:  explain the role of business in society, considering the needs and resources of the community, the main economic systems.  identify and explain the internal and external business environment and the interaction between an organisation and its environment.  introduce and elaborate corporate citizenship.  identify and describe management activities.  explain introductory entrepreneurship and the different types of entrepreneurs; and  identify and explain the four primary management tasks
Business Management 1B	BMA01B1	50%	50%	5	12	The purpose of this module is to develop the students' fundamental theoretical and academic knowledge to provide them with an overview of management functions and prepare them for challenges in the South African business environment. This module will also develop the student	Students should be able to:  Discuss and explain five different management functions:  Finance;  Human Resource Management;  Information; Marketing; External Communication and Public Relations; and Operations and Supply Chain.

						with fundamental academic knowledge, intellectual competencies, and practical skills on how to apply the functional areas of a business.	
Business Management 2A	BMA02A2	50%	50%	6	16	The purpose of the module is to promote an understanding of two tasks, planning and organising, within the interpretation and application of a systems approach.	Students should be able to discuss in detail:  planning within the context of an organisation; implementation of planning within an organisation.  organising within the context of an organisation.  coordination within an organisation; and an organisational structure.
Business Management 2B	BMA02B2	50%	50%	6	16	The purpose of the module is to promote an understanding of the two management tasks, leading and control, in an organisation through the interpretation and application of a systems approach.	Students should be able to discuss in detail:  different approaches in leadership; motivation; the approaches to communicating; the difference between business operations and quality management; and the performance measures, control and risk.
Business Management 3A	BMA03A3	50%	50%	6	16	The purpose of this module is to introduce students to the main themes and concepts of strategic management and its functions within the corporate context. Students will be provided with intellectual competencies, practical skills and an understanding of the comprehensive strategic management processes, which will equip them to manage under VRIN (Valuable, Rare,	Students should be able to: appraise the term 'strategic management', its origin, what it encompasses and what its function is within the corporate context in a commercial or non-commercial setting.  identify and compare the different types of philosophies concerning strategic management and motivate the main guidelines or considerations dictating its deployment; by using authoritative sources, select an appropriate comprehensive

						Inimitable and Non-Substitutable) conditions in a global environment.	corporate strategic management framework or model and explain the essential phases or steps involved in this process; reflect upon VRIN capabilities necessary for changing environments; and explain how the strategy is implemented and evaluated in a business; and describe and reflect upon the macro-importance of building learning organisations and world class organisations in South Africa.
Business Management 3B	BMA03B3	50%	50%	6	16	The purpose of this module is to provide the student with knowledge, interpretation, and an understanding of risk management in any organisation. This module will further develop an appropriate understanding of global trends in sustainability as well as the possibilities for responding and adapting to operating efficiently within dynamic environments.	Students should be able to:  reflect upon the principles, concepts and practice of risk and risk management  reflect on local and global trends in sustainability development  distinguish between the priority areas for sustainability interventions.  reflect upon the tenets of managing and leading in the face of complexity (change, stakeholder demands, requirement for operational efficiency, with limited resources); and  demonstrate an ability to show flexibility, openness and a willingness to respond according to the situation.
End-User Computing A	EUC01A1	50%	50%	5	16	The purpose of this module is to introduce the students to basic information technology (IT) terms, skills and the basic components of	Students should be able to:  explain concepts and terms associated with information technology (IT);

						<p>a computer. The students will be able to</p> <p>manipulate files and use word processing application to solve business problems and to use presentation software.</p>	<p>demonstrate the ability in using common functions of a pc and its operating system;</p> <p>demonstrate the ability to use a word processing application on a computer; and</p> <p>demonstrate the ability to use a presentation application on a computer.</p>
End-User Computing B	EUC01B1	50%	50%	5	16	<p>The purpose of this module is to use spreadsheet applications and database application software to solve business problems. The students will also be able to search the internet and utilise e-mail.</p>	<p>Students should be able to:</p> <p>explain concepts and terms associated with using the internet.</p> <p>demonstrate the ability to use e-mail software on a computer; demonstrate the ability to use a spreadsheet application on a computer; and demonstrate the ability to use a database on a computer.</p>
English 1A	PME1AA 1	50%	50%	6	16	<p>To introduce students to the field of English literary studies, to the distinguishing characteristics and techniques associated with fiction, and to the fundamental critical thinking and essay writing skills required in literary analysis.</p>	<p>Upon completion of this module students should be able to: recognise a limited range of narrative techniques common in fiction; demonstrate basic skills in essay planning and writing; present the main ideas of a critical analysis, by means of close reading of passages from narrative texts.</p>
English 1B	PME1BB 1	50%	50%	6	16	<p>To introduce students to the field of English literary studies, to the distinguishing characteristics and techniques associated with poetry and drama, and to the fundamental critical thinking and essay writing skills required in literary analysis.</p>	<p>Upon completion of this module students should be able to:</p> <p>recognise a limited range of dramatic techniques common in modern and Shakespearean plays; recognise a limited range of poetic techniques common to poetry.</p> <p>demonstrate basic skills in essay planning and writing.</p>

							present the main ideas of a critical
Marketing 1A	MAR01A1	50%	50%	5	16	The purpose of this module is to introduce the student to the basic principles of marketing, mainly in a consumer product context. On a practical level, the student will have attained the necessary experience to identify environmental trends, understand basic consumer behaviour and market segmentation.	Students should be able to:  understand the fundamental marketing concepts and philosophy,  explain the interface between marketing management and the environment, identify customer needs and wants and determine which target markets the organisation can serve best, understand the decision-making process that consumers go through as they make a purchase, understand the role of segmentation, targeting and positioning in marketing, and recognise the importance of information to an organisation.
Marketing 1B	MAR01B1	50%	50%	5	16	The purpose of this module is to introduce the student to the basic principles of marketing, mainly in a consumer product context. On a practical level, the student will be familiar with the product, pricing, distribution and promotion elements of the marketing mix.	Students should be able to:  define and classify products,  understand the nature and benefits of branding,  identify the functional and psychological roles of packaging, understand the role of product in the marketing mix,  explain the role and types of distribution channels,  understand the concept of pricing in marketing,  understand the importance and role of a planned, integrated communication strategy in a marketing context, and  explain how the

							marketing mix is integrated in the overall marketing philosophy.
Marketing 2A	MAR02A2	50%	50%	6	16	The purpose of this module is to equip the student with the necessary knowledge to distinguish between the additional aspects of services and relationship marketing in service businesses. On a practical level, the student will be familiar with the people, process and physical evidence elements of the marketing mix as well as techniques to build relationships with employees and customers.	Students should be able to:  describe the principles of consumer behaviour in a service environment.  understand the role of people, process and physical evidence in the services marketing mix.  understand and apply the principles of relationship marketing; and  design services marketing mix.
Marketing 2C	MAR02C2	50%	50%	6	16	The purpose of this module is to acquire knowledge, practical skills and competencies for applying the principles and concepts of marketing within a sport and recreational setting; to sport products, sport consumers and sport entities. On a practical level these will be applied to sport consumer behaviour, marketing communication and sponsorships, as well as carry out a basic research survey in a sport environment.	Students should be able to:  identify and describe the unique characteristics of sport marketing;  describe the difficulties of the exchange process in sport marketing;  develop a basic operational marketing plan for a small sport enterprise;  show the application of marketing instruments in a sport setting; and  identify and apply the principles of marketing research.
Public Relations 1A	PRL1AA1	50%	50%	5	16	To introduce the student to the principles and practice of Public Relations.	Upon completion of this module students should be able to:  understand the concepts in the broader field of Communication Management;  explain how Public Relations has evolved as a result of shifts in Public Relations approaches;

							understand the current approaches and their challenges.
Public Relations 1B	PRL1BB1	50%	50%	5	16	To provide the student with an understanding of the environmental contexts in which Public Relations is practised.	Upon completion of this module students should be able to:  understand systems thinking within the context of Public Relations practice; understand the impact of the different environmental contexts on the practice of Public Relations; identify the impact of trends on professional Public Relations practice.
Sport and Physical Recreation Studies 3A	SPR3AA3	100%	0%	7	16	Didactical aspects of sport and Growth and Maturation is presented in this module.	During this module students will be introduced to clients, their needs and development and how it influences their leisure preferences. However, unique groups of people in our community and their specific requirements will be focuses on in the second semester module, Sport and Physical Recreation 3B.
Sport and Physical Recreation Studies 3B	SPR3BB3	100%	0%	7	16	An aspect of Sport Psychology and Perceptual motor development is presented in this module.	During this module students will be introduced to the concepts of Sport Psychology and Perceptual motor development and how it related to special populations.
Sport Management 1A	STM1AA1	100%	0%	5	16	The module focusses on General management in sport. The applied principle of Business Management is presented in this module. This module deals with aspects of sport as a business as well as	Be able to apply the knowledge and related general management skills such as planning, organising, leading and control in micro sport environments such as the management of a small sports enterprise such as a team or sports club.

						how sport is administrated.	
Sport Management 1B	STM1BB1	100%	0%	5	16	This module deals with Leisure and Recreation management. Aspects of recreation programming and creation of leisure activities are addressed.	The purpose of this module is to introduce students who are pursuing a career in Sport and Recreation to the various concepts of leisure and how the concepts connect with each other and interact.
Sport Management 1C	STM11Y1	100%	0%	5	16	This is a practical module where first year students experience the rules, coaching activities and presenting the activities of various sporting codes.	This year module, the first of three-year modules in your qualification, introduces students to six popular sporting codes in South Africa. Aspects such as rules, equipment and history of each sporting code will be focused on to provide students with the necessary basic knowledge which they need when pursuing a career in Sport and Recreation in South Africa
Sport Management 2A	STM2AA2	100%	0%	6	16	This module addresses Human Resource and people management from a sport perspective	is to equip students with an in-depth grounding in Human Resource knowledge, theory, principles and skills so that they may contribute to the multi-functional, multinational public and business sectors, confidently executing analytical, interpretive, strategic and integrative skills relating to Human Resource
Sport Management 2B	STM2BB2	100%	0%	6	16	This Module deals with financial management in sport and addresses issues such as budgets, financial planning in sport, and basic accounting with	This module deals with Financial management in sport and addresses issues such as budgets, financial planning in sport, and basic accounting with reference to the sport industry. This module aims to provide students



						reference to the sport industry.	with the intellectual competencies in the acquisition, analysis, interpretation and application of basic accounting concepts, such as budgeting, financial planning, and financial statement analysis. Learners will be guided in terms of application as well as assessment of the principles, disciplines and practices of Sport Finance in a holistic context.
Sport Management 2C	STM22Y2	100%	0%	6	16	Second year students present various aspects of different sporting codes.	This year module, the second of the three in the qualification, assists students in being able to demonstrate and teach six popular sporting codes in South Africa. Based on the knowledge gained in Sport Management 1C, the student will now be able to present these sporting codes to various participants.
Sport Management 3A	STM3AA3	100%	0%	7	16	Event management is the focus of this module.	The purpose of these modules is to perform general middle management responsibilities in a sport and recreation environment. Learners must be able to apply the management functions in the fields of event management.
Sport Management 3B	STM3BB3	100%	0%	7	16	Facility management is the focus of this module.	The purpose of these modules is to perform general middle management responsibilities in a sport and recreation environment. Learners must be able to apply the management functions in the fields of facility management.
Sport Management 3C	STM33Y3	100%	0%	7	16	Third Year students manage the activities of the various sporting codes presented.	This final year module assists students in being able to manage those sporting codes they have been taught over the

							course of two years (Sport Management 1 and 2C).
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## BACHELOR OF COMMERCE IN SPORT MANAGEMENT (B9S14Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Content
Accounting A	ACC0AA1	50%	50%	5	12	<b>CBE module</b> Purpose The purpose of this module is to cover the basic concepts of accounting, the recording of various elementary transactions and the accounting cycle. This forms the basis for further modules in the analysis, interpretation and application of accounting. The only further module for which Accounting A is an acceptable credit is Accounting B. Accounting A and Accounting B are not modules sufficient to allow entry into any accounting module on a second-year level.	<b>CBE module</b> Outcomes Students should be able to: <ul style="list-style-type: none"> <li>• discuss and apply the basic concepts in accounting;</li> <li>• discuss and record simple transactions with reference to the accounting equation;</li> <li>• account for information in the general ledger;</li> <li>• journalise simple transactions;</li> <li>• prepare a trial balance and detect and correct trial balance errors;</li> <li>• discuss the accounting cycle;</li> <li>• discuss and apply the different inventory methods to calculate profit;</li> <li>• identify, measure, present, disclose and record the different asset categories in the annual financial statements for basic transactions;</li> <li>• calculate, journalise and disclose depreciation using different methods;</li> <li>• calculate, journalise and disclose the amortisation of intangible assets;</li> <li>• identify, measure, record, present and disclose the disposal of assets;</li> <li>• adjust the ledger accounts according to the accrual basis;</li> <li>• record transactions in the relevant subsidiary journals;</li> <li>• apply the basic principles of value-added tax;</li> </ul>

							<p>discuss and record transactions in the receivables and payables control accounts;</p> <ul style="list-style-type: none"> <li>• discuss and apply the reconciliation of receivables and payables with their respective lists;</li> <li>• identify, explain, calculate and record: sales or trade discount; settlement or cash discount; bad debts and allowance for credit losses;</li> <li>• present receivables and payables in the statement of financial position;</li> <li>• define inventories according to IAS 2 Inventories; name, discuss and apply the different methods to measure the cost of inventories;</li> <li>• define, calculate and measure net realisable value, fair value and lower of cost;</li> <li>• record transactions relevant to inventories;</li> <li>• present and disclose inventories in the financial statements;</li> <li>• discuss and record all cash transactions; and</li> <li>• reconcile the balance of the bank account per the general ledger with the balance per the bank statement.</li> </ul>
Accounting B	ACC0BB1	50%	50%	5	12	<p><b>CBE module</b></p> <p>The purpose of this module is to further develop the basic principles of accounting taught in Accounting A with reference to specific scenarios and entities. Accounting A and Accounting B are not modules sufficient to allow entry into any accounting module on a second-year level.</p>	<p><b>CBE module</b></p> <p>Students should be able to:</p> <p><b>Non-trading entities:</b></p> <ul style="list-style-type: none"> <li>• prepare a statement of receipts and payments and financial statements in respect of non-trading entities;</li> <li>• account for transactions in the general ledger; and</li> <li>• identify, explain, calculate, record, present and disclose receivables, payables, inventories, cash and property, plant and equipment.</li> </ul>

							<p><b>Partnerships:</b></p> <ul style="list-style-type: none"> <li>• discuss and apply the principles of partnerships;</li> <li>account for information in the general ledger of a partnership; and</li> <li>• prepare financial statements of a partnership.</li> </ul> <p><b>Company financial statements:</b></p> <ul style="list-style-type: none"> <li>• discuss the company as a form of entity briefly;</li> <li>• discuss, calculate and record share transactions of a simple nature; and</li> <li>• prepare the following components of the annual financial statements of a company according to the minimum requirements of the Companies Act (71 of 2008) and International Financial Reporting Standards: statement of financial position; statement of comprehensive income; statement of changes in equity and accounting policies and explanatory notes.</li> </ul> <p><b>Statement of Cash flow:</b></p> <ul style="list-style-type: none"> <li>• a simple statement of cash flow with notes, under the following headings, is prepared in accordance with IAS 7 Statement of Cash Flows: <ul style="list-style-type: none"> <li>- cash flows from operating activities;</li> <li>- cash flow from investing activities;</li> <li>- cash flow from financing activities; and</li> <li>- net change in cash and cash equivalents.</li> </ul> </li> </ul> <p><b>Budgets:</b></p> <ul style="list-style-type: none"> <li>• calculate and prepare a cash budget, budgeted statement of comprehensive income, budgeted statement of changes in equity and budgeted statement of financial position; and</li> <li>• prepare cash budgets and budgeted financial statements.</li> </ul>
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Analytical Techniques A	ATE01A1	50%	50%	5	15	<b>Science module</b> A student credited with this module will have developed a basic ability to define terms commonly used in Statistics, to show how a set of data can be organised in a meaningful way and presented to reveal or enhance its fundamental properties. The student will also be able to measure and model the linear relationship between two variables. A student credited with this module will have developed a basic ability to analyse a time series, understand and implement the basic concepts of probability, probability distributions, sampling distributions and elementary matrix operations.	<b>Science module</b> Students should be able to: <ul style="list-style-type: none"> <li>• demonstrate the ability to use statistical terminology in the appropriate way and distinguish between different measurement scales;</li> <li>• show how the raw data can be tabulated and presented graphically;</li> <li>• calculate and interpret measures of central tendency and spread for a set of data and perform elementary probability calculations;</li> <li>• identify different methods used to gather sample data and understand the basic concepts of sampling distributions and statistical inference;</li> <li>• show how to analyse a time series and forecast values for future time periods; and</li> <li>• determine and use least squares regression lines and the coefficients of correlation.</li> </ul>
Analytical Techniques B	ATE01B1	50%	50%	5	15	<b>Science module</b> To develop a basic understanding of inferential statistics and the ability to apply the methodology to a variety of business oriented problems. This module is also intended to equip students with mathematical skills involving the differential and integral calculus and the optimisation of functions subject to constraints and to apply these to understand modern theories about the functioning of the economy	<b>Science module</b> Students should be able to: <ul style="list-style-type: none"> <li>• apply various inferential methods to data;</li> <li>• apply the rudiments of the differential and integral calculus to business applications; and</li> <li>• find the maximum or minimum of a multivariable function subject to linear constraints on the variables.</li> </ul>
Anatomy & Physiology 1A	ANP01A1	100%	0%	5	8	The purpose of this module is for the learner to develop	<ul style="list-style-type: none"> <li>• Describe in detail the structural and</li> </ul>

						<p>intellectual competencies and practical skills in the analysis, interpretation and application of the neuromuscular and cardiorespiratory systems in the field of Anatomy and Physiology.</p>	<p>functional divisions of the nervous system.</p> <ul style="list-style-type: none"> <li>• Define the neuron; name the important structural components as well as their functional role.</li> <li>• Describe the importance of the myelin sheath and classify the neurons according to structure and function.</li> <li>• Understand the role of the membrane ion channels. Describe the resting membrane potential and define depolarization, hyperpolarization and action potential. Describe the initiation of an action potential as well as the threshold value and “all-or-none” law.</li> <li>• Name the main regions of the brain and their functions, the subdivisions of the brain stem, protective layers of the brain and the anatomical structure of the spinal cord.</li> <li>• Define the peripheral nervous system and its components.</li> <li>• Classify the sensory receptors according to its structure, registered stimulus and where they are located in the body.</li> <li>• Describe the roles of the parasympathetic and sympathetic divisions.</li> <li>• Discuss the microscopic anatomy of skeletal muscle, the motor unit and the sliding filament theory.</li> <li>• Discuss the stretch reflex, and force, velocity and duration of skeletal muscle contraction.</li> <li>• Describe in detail the</li> </ul>
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							<p>structural and functional units of the cardiovascular system.</p> <ul style="list-style-type: none"> <li>• Describe the events of cardiac muscle cell contraction, and the physiological systems at work in the heart.</li> <li>• Describe the structural components of blood vessels and explain the various physiological aspects of blood vessel function and circulation.</li> <li>• Describe the structural and functional units of the respiratory system.</li> <li>• Describe the physiological mechanisms involved in breathing and gaseous exchange in the body; and explain the transport of oxygen and carbon dioxide by blood.</li> </ul>
Anatomy & Physiology 1A	ANP01B1	100%	0%	5	8	<p>The purpose of this module is for the learner to develop intellectual competencies and practical skills in the analysis, interpretation and application of the renal and endocrine systems, hematology, buffer systems and digestion in the field of Anatomy and Physiology.</p>	<ul style="list-style-type: none"> <li>• Describe the gross anatomy of the kidneys and its coverings, trace the blood supply through the kidney and describe the anatomy of a nephron.</li> <li>• Describe the mechanisms of urine formation.</li> <li>• Briefly describe the physiology of the ureters, bladder, urethrae as well as micturition.</li> <li>• Describe water, electrolyte and acid-base balance in the body.</li> <li>• Understand the roles of various electrolytes on maintaining the acid-base environment in the kidneys.</li> <li>• Chemically classify hormones, describe</li> </ul>

							<p>two major mechanisms by which hormones bring about their effects on their target tissues, and explain how hormone release is regulated.</p> <ul style="list-style-type: none"> <li>• Name the major endocrine organs, the hormones they secrete and name their physiological effects.</li> <li>• Relate the composition and functions of blood.</li> <li>• Describe the process of haemostasis.</li> <li>• Describe the blood group types.</li> <li>• Give an overview of the digestive system.</li> </ul>
Business Management 1A	BMA11A1	50%	50%	5	12	<p><b>CBE module</b></p> <p>The purpose of this module is to introduce students to the main themes and concepts of Business Management, the business environment and its interactive sub-environments. Furthermore, students will be provided with a global overview of general management as a management function and prepare them for challenges in the South African business environment. This module is designed to provide the student with intellectual competencies, practical skills and an understanding of management based on historical and modern approaches as well</p>	<p><b>CBE module</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• explain the role of business in society, considering the needs and resources of the community, the main economic systems;</li> <li>• identify and explain the internal and external business environment and the interaction between an organisation and its environment;</li> <li>• introduce and elaborate corporate citizenship;</li> <li>• identify and describe management activities;</li> <li>• explain introductory entrepreneurship and the different types of entrepreneur; and</li> <li>• identify and explain the four primary management tasks.</li> </ul>



						as the management tasks, namely planning, organising, leading and control.	
Business Management 1B	BMA21B1	50%	50%	5	12	<b>CBE module</b> The purpose of this module is to develop the students' fundamental theoretical and academic knowledge to provide them with an overview of management functions and prepare them for challenges in the South African business environment. This module will also develop the student with fundamental academic knowledge, intellectual competencies, and practical skills on how to apply the functional areas of a business.	<b>CBE module</b> Students should be able to: <ul style="list-style-type: none"> <li>• Discuss and explain five different management functions:               <ul style="list-style-type: none"> <li>o Finance;</li> <li>o Human Resource Management;</li> <li>o Information;</li> <li>o Marketing; External Communication and Public Relations; and</li> <li>o Operations and Supply Chain.</li> </ul> </li> </ul>
Business Management 2A	BMG02A 2	50%	50%	6	16	<b>CBE module</b> The purpose of the module is to promote an understanding of two tasks, planning and organising, within the interpretation and application of a systems approach.	<b>CBE module</b> Students should be able to discuss in detail: <ul style="list-style-type: none"> <li>• planning within the context of an organisation;</li> <li>• implementation of planning within an organisation;</li> <li>• organising within the context of an organisation;</li> <li>• coordination within an organisation; and</li> <li>• an organisational structure.</li> </ul>
Business Management 2B	BMG02B 2	50%	50%	6	16	<b>CBE module</b> The purpose of the module is to promote an understanding of the two management tasks, leading and control, in an organisation through the interpretation and	<b>CBE module</b> Students should be able to discuss in detail: <ul style="list-style-type: none"> <li>• different approaches in leadership;</li> <li>• motivation;</li> <li>• the approaches to communicating;</li> <li>• the difference between business operations and quality management; and</li> </ul>

						application of a systems approach.	<ul style="list-style-type: none"> <li>the performance measures, control and risk.</li> </ul>
Business Management 3A	BMA13A3	50%	50%	7	16	<b>CBE module</b> The purpose of this module is to introduce students to the main themes and concepts of strategic management and its functions within the corporate context. Students will be provided with intellectual competencies, practical skills and an understanding of the comprehensive strategic management processes, which will equip them to manage under VRIN (Valuable, Rare, Inimitable and Non-Substitutable) conditions in a global environment.	<b>CBE module</b> Students should be able to: <ul style="list-style-type: none"> <li>appraise the term 'strategic management', its origin, what it encompasses and what its function is within the corporate context in a commercial or non-commercial setting;</li> <li>identify and compare the different types of philosophies concerning strategic management and motivate the main guidelines or considerations dictating its deployment; by using authoritative sources, select an appropriate comprehensive corporate strategic management framework or model and explain the essential phases or steps involved in this process;</li> <li>reflect upon VRIN capabilities necessary for changing environments; and</li> <li>explain how the strategy is implemented and evaluated in a business; and describe and reflect upon the macro-importance of building learning organisations and world class organisations in South Africa.</li> </ul>
Business Management 3B	BMG03B3	50%	50%	7	16	<b>CBE module</b> The purpose of this module is to provide the student with knowledge, interpretation and an understanding of risk management in any organisation. This module will further develop an appropriate understanding of global trends in sustainability as well as the	<b>CBE module</b> Students should be able to: <ul style="list-style-type: none"> <li>reflect upon the principles, concepts and practice of risk and risk management</li> <li>reflect on local and global trends in sustainability development</li> <li>distinguish between the priority areas for sustainability interventions;</li> <li>reflect upon the tenets of managing and leading</li> </ul>

						possibilities for responding and adapting to operating efficiently within dynamic environments	in the face of complexity (change, stakeholder demands, requirement for operational efficiency, with limited resources); and • demonstrate an ability to show flexibility, openness and a willingness to respond according to the situation.
Didactics and Exercise Science 2A	DES02A2	100%	0%	6	16	The purpose of this module is to acquire knowledge and practical skills in the didactical competencies related to various phases of planning, preparation, presentation and assessment within the sport, recreation context.	To critically reflect on didactical decisions (provision and structuring of learning experiences and opportunities), curriculum development, implementation of a typical training session, of basic assessment and feedback strategies.  Develop intellectual competencies and practical skills in the presentation, correct demonstration and explanation as well as the analysis, interpretation and application of certain basic physical activity, games and sport skills.
Economics 1A	ECO01A1	50%	50%	5	12	<b>CBE module</b> The aim of this module is to introduce the learner to the world of economics and secondly to highlight some of the major economic issues experienced in the South African economy. The module will prepare learners and give them the necessary foundation to understand the more complex framework of the other disciplines within the science of economics.	<b>CBE module</b> At the end of this module the learner must be able to <ul style="list-style-type: none"> <li>- Critically explain and apply all related concepts associated with general economics within a national and global context.</li> <li>- Define and explain economics as a social science.</li> <li>- Critically discuss the economic problem of scarcity and reflect on scarcity in a South African context.</li> <li>- Identify and describe different economic systems and reflect on the price and income mechanisms.</li> <li>- Analyse the functioning and problems of a market</li> </ul>

							<p>economy and reflect on the price and income mechanisms.</p> <ul style="list-style-type: none"> <li>- Discuss and explain the role of the government in the economy and reflect on the role of fiscal policy in the South African economy.</li> <li>- Discuss and explain the role of the foreign sector in the economy.</li> <li>- Discuss and explain the role of money and interest rates in the economy. Discuss, explain, graphically illustrate and perform calculus on the total expenditure model.</li> <li>- Discuss, explain, illustrate and evaluation all issues that pertain to targets, instruments &amp; goals of macroeconomic policy.</li> <li>- Discuss, explain and graphically illustrate the AD-AS model. Discuss, explain and graphically illustrate market demand conditions, cost and supply/capacity conditions and the different competitive environments for businesses in a market economy.</li> <li>- Discuss the concept of sectoral economics in South Africa.</li> </ul>
Economics 1B	ECO01B1	50%	50%	5	12	<p><b>CBE module</b></p> <p>The aim of this module is to introduce the learner to the world of economics and secondly to highlight some of the major economic issues experienced in the South African economy. The module will prepare learners and give them the necessary foundation to understand the</p>	<p><b>CBE module</b></p> <p>At the end of this module the learner must be able to</p> <ul style="list-style-type: none"> <li>- Critically explain and apply all related concepts associated with general economics within a national and global context.</li> <li>- Define and explain economics as a social science.</li> <li>- Critically discuss the economic problem</li> </ul>

						<p>more complex framework of the other disciplines within the science of economics.</p>	<p>of scarcity and reflect on scarcity in a South African context.</p> <ul style="list-style-type: none"> <li>- Identify and describe different economic systems and reflect on the price and income mechanisms.</li> <li>- Analyse the functioning and problems of a market economy and reflect on the price and income mechanisms.</li> <li>- Discuss and explain the role of the government in the economy and reflect on the role of fiscal policy in the South African economy.</li> <li>- Discuss and explain the role of the foreign sector in the economy.</li> <li>- Discuss and explain the role of money and interest rates in the economy.</li> <li>- Discuss, explain, graphically illustrate and perform calculus on the total expenditure model.</li> <li>- Discuss , explain, illustrate and evaluation all issues that pertain to targets, instruments &amp; goals of macroeconomic policy.</li> <li>- Discuss, explain and graphically illustrate the AD-AS model.</li> <li>- Discuss, explain and graphically illustrate market demand conditions, cost and supply/capacity conditions and the different competitive environments for businesses in a market economy.</li> <li>- Discuss the concept of sectoral economics in South</li> </ul>
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							Africa.
Exercise Science 2B	EXS02B2	100%	0%	6	16	Students will be able to analyse, discuss and reflect, the role of fitness parameters in sports	<ul style="list-style-type: none"> <li>Learners should develop intellectual competencies and practical skills in the analysis, interpretation and application of exercise science principles in the fitness and health-, coaching and teaching sectors of the sport industry.</li> <li>Reflect on response patterns of respiratory variables during various exercise modes</li> <li>Identify variations in resting volumes, exercise responses and training adaptations among children, adults and the elderly concerning the respiratory variables.</li> <li>Reflect on response patterns of the major cardiovascular variables during various exercise modes</li> <li>Identify variations in resting volumes, exercise responses and training adaptations among children, adults and the elderly concerning the cardiovascular variables.</li> </ul> <p>After completion of this module, the student will be able to periodize a training programme, design different training programmes by applying the training principles for muscle strength and endurance, cardiovascular endurance speed and power.</p>
Facility, Event and Human Resource Management in	FEH03D3	100%	0%	7	16	Students should develop intellectual capabilities and practical skills in	Learners should be able to identify, describe and debate the roles of the different systems of a

Sport 3D						the field of Facility and Event Management as well as Human Resource Management in Sport.	<p>sport facility; Explain the components and purpose of operations management of a sport facility; Argue the justification of safety and security management at a sport facility and event; Be able to develop a crowd management plan for a sport event; Plan, execute and assess a sport event; Implement a risk management plan for an event; and develop a equipment and facility maintenance plan.</p> <p>Learners should be able to discuss and debate volunteers and volunteerism as a human resource asset of the sport industry; Distinguish between volunteerism and professionalism in sport; Discuss the application of the South African labour law and other laws in the management of human resources in sport; Apply the different leadership theories in the sport industry; Are able to manage stress and time in a sport organisational context.</p>
Industrial Psychology 1A	IPS11A1	50%	50%	5	16	<p><b>CBE module</b></p> <p>The purpose of this module is to provide students with an introduction to the field of Industrial Psychology. It provides a basic knowledge and understanding of industrial psychology concepts as related to the biological basis of behaviour, research methodology, human development, learning, perception, cognition, motivation, attitude and values,</p>	<p><b>CBE module</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• define, describe and explain industrial psychology;</li> <li>• identify and discuss the different schools of psychology;</li> <li>• describe and discuss the developments of industrial psychology;</li> <li>• identify and describe the steps in the research process, considering possible errors, ethical principles and social issues;</li> <li>• identify and discuss the biological basis for behaviour and illustrate the application of such knowledge to job design;</li> <li>• define and explain all necessary aspects of</li> </ul>

						<p>personality, attraction and affiliation, group behaviour, and social processes for development. Students need to identify, describe and distinguish concepts and theories applicable to the scientific field of Industrial Psychology, acquiring a basic understanding of the nature of problems experienced in organisations.</p>	<p>human development, learning, perception, cognition, motivation, attitudes and values and its relevance and application in the workplace;</p> <ul style="list-style-type: none"> <li>• define and explain the relevance of interpersonal attraction and affiliation and group behaviour in the workplace;</li> <li>• define and discuss personality and the different methods of personality assessment considering its relevance and importance in the work environment; and</li> <li>• describe, discuss and explain the social processes in an organisation and how their various components interact.</li> </ul>
Industrial Psychology 1B	IPS21B1	50%	50%	5	16	<p><b>CBE module</b></p> <p>The purpose of this module is firstly to provide students with an introduction to the field of Industrial Psychology. It provides a basic knowledge and understanding of the multi-dimensional nature of ergonomics, as well as the different applicable fields that contribute to the knowledge base of ergonomics. Students need to identify, describe and apply theoretical knowledge and concepts related to ergonomics in order to establish an effective, safe and healthy human-machine interface. Secondly, the purpose of this module is to provide students with basic knowledge and</p>	<p><b>CBE module</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• define ergonomics;</li> <li>• describe the historical development of ergonomics as well as the focus and objectives of ergonomics;</li> <li>• discuss the role of the ergonomist, apply the advantages of ergonomics and apply ergonomics to specific user populations;</li> <li>• know the basics regarding human abilities and limitations that can influence human reliability in systems operation;</li> <li>• define and explain consumer psychology;</li> <li>• describe the establishment of consumer psychology as a sub-discipline of industrial psychology and indicate its strategic applications;</li> <li>• describe the intra-psychic domain of consumer behaviour and to explain how marketers go about influencing consumers' behaviour in order to stimulate buying behaviour;</li> </ul>



						<p>understanding of the scientific literature regarding consumer psychology. Students need to identify, describe and contextualise theoretical knowledge and concepts related to consumer psychology in order to understand its basic nature and practical implications. The above-mentioned allows for the basic awareness and understanding of the contributions of Industrial Psychology in the establishment of effective human-machine system interactions as well as consumer behaviour within the broader society.</p>	<ul style="list-style-type: none"> <li>• describe the mechanism of the consumer decision-making process;</li> <li>• describe the organismic processes of consumption; and</li> <li>• contextualise the contemporary consumer.</li> </ul>
Industrial Psychology 2A	IPS12A2	50%	50%	6	16	<p><b>CBE module</b></p> <p>The purpose of this module is to provide students with an introduction to study the field of Organisation Behaviour. Students are equipped with the intellectual competencies for acquiring and understanding knowledge about behaviour on an individual, group and organisational level. Students need to identify, describe, distinguish, apply and analyse concepts and theories related to the scientific field of organisational psychology, allowing a thorough understanding of the nature of</p>	<p><b>CBE module</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• describe and explain organisation psychology;</li> <li>• differentiate between various frames of reference applicable to studying behaviour in organisations;</li> <li>• demonstrate concepts and theories related to behaviour in organisations on individual, group/team and organisational level;</li> <li>• examine the importance of organisational learning and renewal;</li> <li>• analyse, examine and discuss the importance of leadership, strategy and organisational culture as the primary transformational variables in the organisational context;</li> <li>• analyse and discuss the importance of organisational culture</li> </ul>

						problems experienced within organisations and options for addressing these problems.	and dynamics of culture in high-performing organisations; <ul style="list-style-type: none"> <li>• examine and discuss theoretical foundations of organisational change and development;</li> <li>• critically assess emerging trends in organising human activity and behaviour in view of available organisational theory and design perspectives; and</li> <li>• analyse, examine and discuss the importance of power, conflict, communication and decision-making within group structures and critically analyse their effects on the organisation.</li> </ul>
Industrial Psychology 2B	IPS22B2	50%	50%	6	16	<b>CBE module</b> The purpose of this module is to introduce students to research methods and psychological assessment in Industrial Psychology.	<b>CBE module</b> Students should be able to: <ul style="list-style-type: none"> <li>• describe and explain the role of research in the profession and science of Industrial Psychology;</li> <li>• discuss and evaluate different strategies of research;</li> <li>• know and understand the steps to follow when undertaking research in behavioural sciences, and Industrial Psychology, in particular;</li> <li>• explain and understand psychological assessment and the purpose thereof, within the multicultural South African context;</li> <li>• describe and understand different types of assessment;</li> <li>• describe and understand the particular current issues in psychological assessment; and</li> <li>• describe and understand the process of psychological assessment.</li> </ul>
Industrial Psychology 3A	IPS13A3	50%	50%	7	16	<b>CBE module</b> The purpose of this module is to	<b>CBE module</b> Students should be able to:

						<p>provide students with the ability to understand and describe the field of Personnel Psychology. Core aspects of the module include research methods in Personnel Psychology, the changing nature of work, standards of effective personnel decision-making, psychological assessments in recruitment and selection, and aspects of fairness in the South African labour and legislative context. The next part will provide students with the ability to understand and describe the field of Career Psychology. Academic content related to individual career-planning processes, life and career phases, contemporary career issues, the integration of career management principles with Human Resource (HR) systems, and industrial mental health is covered.</p>	<ul style="list-style-type: none"> <li>• outline the academic field of personnel psychology;</li> <li>• develop a clear understanding of all the related research methods that are employed in the field of personnel psychology;</li> <li>• examine all the key constructs, theories and strategies from the academic field of personnel psychology;</li> <li>• analyse the applicability of theory to hypothetical questions within the applied field of study;</li> <li>• draw conclusions and use these to formulate appropriate solutions and actions to address the theory-related issues raised in the group discussions, practical exercises and case studies;</li> <li>• develop an appreciation of the complexities related to the making of sound personnel decisions, specifically within the South African labour context;</li> <li>• develop a number of cross-field learning objectives;</li> <li>• conceptualise the academic field of career psychology;</li> <li>• comprehend all the key constructs, theories and strategies from the academic field of study;</li> <li>• make inferences concerning the applicability of theory to hypothetical questions within the applied field of study;</li> <li>• draw conclusions and use these to formulate appropriate solutions and actions to address the theory-related issues raised in the group discussions practical exercises and case studies;</li> <li>• develop an appreciation of the complexities related to</li> </ul>
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							<p>making sound career decisions, specifically within the South African labour context;</p> <ul style="list-style-type: none"> <li>• develop and understand the links between career psychology and HR career management;</li> <li>• develop and understand the complexities of contemporary career issues;</li> <li>• formulate an overview of the field of industrial mental health and its practical applications; and</li> <li>• develop a number of cross-field learning objectives.</li> </ul>
Industrial Psychology 3B	IPS23B3	50%	50%	7	16	<p><b>CBE module</b></p> <p>The purpose of this module is to provide students with the intellectual competencies required to identify, examine and apply ethical principles which will enable them to comprehend their professional ethical obligation as it applies to the field of Industrial Psychology. This module will also provide students with applied competencies in Industrial Psychology in order to examine, apply and analyse the relevance of the field within organisations. This module allows for a comprehensive understanding of ethical principles within organisations as well as the practical application of Industrial Psychology.</p>	<p><b>CBE module</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• conceptualise industrial psychology as a profession in relation to other disciplines;</li> <li>• comprehend the professional ethical obligations of industrial psychology;</li> <li>• construct ethical decisions based on the profession's code of ethics;</li> <li>• examine ethical issues in the subfields of industrial psychology;</li> <li>• present a framework of the role of industrial psychologists in enhancing organisational ethics;</li> <li>• evaluate methods of evaluating the selection process in organisations;</li> <li>• evaluate employee performance in the design and evaluation of employee training and development in the organisations;</li> <li>• examine employee motivation, satisfaction and commitment within the new organisational context;</li> <li>• evaluate the importance of leadership and group behaviour in the organisation;</li> <li>• consider the</li> </ul>

							importance of human factors and working conditions in organisational health; and • develop a number of cross-field learning objectives.
Kinesiology 1A	KIN01A1	100%	0%	5	8	Students should develop intellectual capabilities and practical skills in the field of skeletal and muscular anatomy, biomechanics, wellness and sport injuries. Learners should be able to identify the different skeletal and muscular structures and analyse simple joint movements. Learners should also be able to apply biomechanical principles in the fields of sport and human movement. Learners should also reflect on the role of the skeletal and muscular system during everyday activities, exercise, and sport. This module also focuses on the principles of good physical, mental, and social well-being which includes disease prevention and control, and personal fitness. A basic introduction to injury prevention in sport.	<ul style="list-style-type: none"> <li>• Use the appropriate terminology in anatomy and the correct terminology for the general movements of the body.</li> <li>• Identify the different aspects of each bone in the major joints of the upper limb</li> <li>• Identify the major joints of the lower limb</li> <li>• Identify the different sections/curves of the spinal column</li> <li>• Explain certain key concepts and definitions in the field of Biomechanics, e.g. planes, axes, directional terminology and joint movements.</li> <li>• Analyze a movement in terms of the phase of the movement, the joints involved, the specific movements that take place, the agonistic and antagonistic muscles, as well as the types of muscle contraction (Anatomical analysis).</li> <li>• Use the correct biomechanical terminology and explain the concept of levers.</li> <li>• Perform simple calculations.</li> </ul>
Kinesiology 1B	KIN01B1	100%	0%	5	8	Learners should develop intellectual capabilities and practical skills in the field of wellness and sport injuries. This module focuses on the principles of good physical, mental, and social well-being which	<ul style="list-style-type: none"> <li>• Define wellness related to the dimensions of wellness, and identify behaviours contributing to the development of disease</li> <li>• Identify destructive health behaviours and strategies to achieve optimal health</li> <li>• Give a brief overview of sport injuries</li> </ul>

						<p>includes disease prevention and control, and personal fitness. A basic introduction to injury prevention in sport will also be presented. Learners will be taught how to conduct physical measurements during an evaluation of an athlete during the (4th term) as well as how to interpret each result.</p>	<ul style="list-style-type: none"> <li>• Understand the basis of injury prevention and treatment</li> <li>• Describe the importance of health screening during pre-participation in exercise.</li> <li>• Be able to identify the indications of various diseases a participant might possess.</li> <li>• Become familiar with recommendations provided for safe testing</li> <li>• Describe the contraindications to exercise testing, participant consent and participant instructions before exercise</li> <li>• Conduct a full anthropometrical Assessment of an athlete and be able to develop an athlete profile through evaluation</li> <li>• Describe the components of a comprehensive health fitness evaluation.</li> <li>• Become familiar with the basic principles and guidelines for a health-related physical fitness testing.</li> <li>• Identify the major physical fitness components prominent in athletic performance evaluation.</li> <li>• Decide on the appropriate test to measure the fitness component.</li> <li>• Become familiar with possible field-testing protocols to assess the fitness components</li> </ul>
Leisure and Sport Tourism Studies 2D	LST02D2	100%	0%	6	16	<p>Learners are introduced to leisure programming concepts and the competencies and practical skills necessary to design and present leisure programmes for a variety of target groups. In the second part of the module, the focus will be on</p>	<ul style="list-style-type: none"> <li>- Understand the foundations of leisure programming</li> <li>- Conduct leisure programme planning and delivery.</li> <li>- Understand the phenomenon of tourism from a sport and leisure management perspective. The focus will be on the management of the behaviour of the tourist and satisfying his/her needs to various sport</li> </ul>

						tourism and the aspects related specifically to the sport industry.	and leisure events and facilities. - Plan, organize and lead sport and leisure tours.
Practical Aspects 2E	PRA02E2	100%	0%	6	8	The purpose of this module is the practical implementation of theoretical knowledge of management and social integration at recreational camp. Practical experience through work integrated learning experiences by volunteering for projects. Due to the Covid pandemic this module cannot include camp attendance, therefore the students will be required to develop a portfolio by completing a series of tasks as a group which will include practical components, group work and community engagement, on a virtual platform.	<ul style="list-style-type: none"> <li>To complete a sequence of tasks to build up your support, knowledge, planning and consulting, up to the actual presenting of these activities and finally evaluating its effect.</li> <li>Students will include some background information on theory about team building, group forming stages, and various recreation activities and how they are used in sequence to help move groups through the stages.</li> <li>Students will be required to create a 5 week plan of virtual activities which will help them bond as a group and help ease the stress of the situation we are in. This group must consist of at least 5 people who work together or who rely on each other to do certain tasks.</li> </ul>
Sport Administration 1C	SPA01C1	100%	0%	5	8	The purpose of this module is that learners should be able to understand the development of sport in the South African context, and to perform general first level management administrative responsibilities in a sport and recreation environment. Learners should further be able to apply the management functions in the field of sport administration. The module is divided into two sections sport history and	<ul style="list-style-type: none"> <li>Understand the place of sport in society</li> <li>Define sport and be able to analyse the basic requirements of an activity for classification purposes</li> <li>Describe the characteristic of sport</li> <li>Perform a SWAT analysis to provide a holistic view of strengths, weaknesses, opportunities and threats that confront the sporting organisation.</li> <li>Understanding the functioning of the sport environment model.</li> <li>Identify the four fundamentals of organising.</li> </ul>

						sport administration.	
Sport Management 2C	SPM02C2	100%	0%	6	16	The purpose of this module is for the learner to develop intellectual competencies in the management of sport.	Learners should be able to distinguish between the segments and sectors in the sport industry; Distinguish between management, administration and sport management; Describe the macro, micro and market environments of the sport enterprises; Debate and apply the principles of planning, organising directing/leading and control in the management of sport; and provide an overview of the significance of the management of sport in the current context.
Sport Marketing and Finance 3C	SFM03C3	100%	0%	7	8	Students should develop intellectual capabilities and practical skills in the Sport Finance and Marketing.	<p>Learners should be able to distinguish between the marketing of sport and marketing through sport; Debate the uniqueness of the sport marketing; Apply concepts of consumer behaviour; Argue the relevance of the principles of sport marketing, including market segmentation, target market, promotion and distribution of sport products.</p> <p>Learners should be able to discuss the basic financial concepts within the context of sport; Debate the reason and process of financial compliance; Describe the management of cash flow; Explain the sources of revenue in sport organizations; Reflect on the development of budgets and process of budgeting; Evaluate economic, customer and demand theories relevant to the management of sport; and distinguish between non-profit and public sectors in the management of finances.</p>



Sport Practice 1D	SPP01D1	100%	0%	5	8	The purpose of this module is to introduce students to the interpretation, analysis and application of the rules and assessment in the sporting codes of Basketball, Cricket, Soccer, Netball, Hockey and Rugby.	<ul style="list-style-type: none"> <li>• Explain the Rules and Regulations of the game.</li> <li>• Identify the Equipment used</li> <li>• Illustrate dimensions of the playing Field</li> <li>• Identify Playing Positions and their roles</li> <li>• Conduct a needs analysis of sport</li> <li>• Evaluation of the Sport</li> <li>• Movement/biomechanical analysis</li> <li>• Physiological analysis/ Injury analysis</li> <li>• Application of training principles</li> </ul>
Sport Psychology and Perceptual Motor Learning 3A	SPP03A3	100%	0%	7	16	The purpose of this module is for students to understand the impact of motor development across the life span from infancy through older adulthood. Movement patterns and their developmental sequences, and the underlying mechanisms that are related to changes in these aspects will be studied. The processes of acquiring new skills and movement patterns and the correction of faulty movement patterns will be addressed. Learning will be facilitated with class discussions and examples; this will allow the learner to implement theory in real-life scenarios.	<p>Motor Skill: What Is It?</p> <p>Individual Differences and Motor Abilities</p> <p>Principles of Human Skilled Performance</p> <p>Processing Information and Making Decisions</p> <p>Sensory Contributions to Skilled Performance</p> <p>Movement Production and Motor Programs</p> <p>Principles of Motor Control and Movement Accuracy</p> <p>The content entails an introduction to sport psychology, the mind and sport performance, stress and anxiety in sport, arousal and sport performance, theoretical considerations in the management of stress and anxiety, stress management techniques, visualization, imagery, mental imagery training, concentration, concentration training, goal setting and self-confidence, the use of cognition in sport, and the development of a mental training program.</p>
Sport Sociology 3B	SPS03B3	100%	0%	7	16	The purpose of this module is to understand the application of theories, and socialization and participation in structured sport programmes.	<ul style="list-style-type: none"> <li>• Develop an understanding, and the intellectual competencies as well as the application of relevant sport sociological and philosophical theories, ideologies and concepts such as the social body,</li> </ul>

							<p>identity and social worlds.</p> <ul style="list-style-type: none"> <li>• Apply sociology of sport and sport philosophical concepts and theories to the debate of sport in the South African society, such as deviance, aggression and violence in sport; socialisation in(to) sport; youth and sport participation; and an introduction to the following themes: sport and the economy; sport and the media; sport and politics; sport (for) development.</li> <li>• Develop competencies to argue, debate, critically analyse and reflect on social issues and controversies (public debates) in sport and the discourse of sport and the physical culture in context.</li> </ul>
Work Integrated Learning 3E	WIL03E3	100%	0%	7	8	Practical Experiential learning of a professional(career ) field.	<p>Practical Experiential learning in a sport organisation.</p> <p>Understand the structure and functioning of sport organisations.</p> <p>Practical implementation of theoretical knowledge attained in various modules in the qualification.</p>

## BACHELOR OF HEALTH SCIENCES IN SPORT AND EXERCISE SCIENCES (B9SE1Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Outcome
Anatomy and Physiology 1	ANPSHY 1	100%	0%	5	15	The purpose of this module is for the learner to develop intellectual competencies and practical skills in the analysis, interpretation and application of the neuromuscular and cardiorespiratory systems in the field of Anatomy and Physiology.	<ul style="list-style-type: none"> <li>• Describe in detail the structural and functional divisions of the nervous system.</li> <li>• Define the neuron; name the important structural components as well as their functional role.</li> <li>• Describe the importance of the myelin sheath and classify the neurons according to structure and function.</li> </ul>

					<p>Furthermore, to develop intellectual competencies and practical skills in the analysis, interpretation and application of the neuromuscular and cardiorespiratory systems in the field of Anatomy and Physiology.</p>	<ul style="list-style-type: none"> <li>• Understand the role of the membrane ion channels. Describe the resting membrane potential and define depolarization, hyperpolarization and action potential.</li> </ul> <p>Describe the initiation of an action potential as well as the threshold value and “all-or-none” law.</p> <ul style="list-style-type: none"> <li>• Name the main regions of the brain and their functions, the subdivisions of the brain stem, protective layers of the brain and the anatomical structure of the spinal cord.</li> <li>• Define the peripheral nervous system and its components.</li> <li>• Classify the sensory receptors according to its structure, registered stimulus and where they are located in the body.</li> <li>• Describe the roles of the parasympathetic and sympathetic divisions.</li> <li>• Discuss the microscopic anatomy of skeletal muscle, the motor unit and the sliding filament theory.</li> <li>• Discuss the stretch reflex, and force, velocity and duration of skeletal muscle contraction.</li> <li>• Describe in detail the structural and functional units of the cardiovascular system.</li> <li>• Describe the events of cardiac muscle cell contraction, and the physiological systems at work in the heart.</li> <li>• Describe the structural components of blood</li> </ul>
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							<p>vessels and explain the various physiological aspects of blood vessel function and circulation.</p> <ul style="list-style-type: none"> <li>• Describe the structural and functional units of the respiratory system.</li> <li>• Describe the physiological mechanisms involved in breathing and gaseous exchange in the body; and explain the transport of oxygen and carbon dioxide by blood.</li> <li>• Describe the gross anatomy of the kidneys and its coverings, trace the blood supply through the kidney and describe the anatomy of a nephron.</li> <li>• Describe the mechanisms of urine formation.</li> </ul>
Applied Physiology 2A	APSH2 A	100%	0%	6	15	The purpose of this module is for the learner to develop intellectual competencies and clinical skills in Exercise Physiology and the assessment of health and fitness.	The learner should be able to identify and explain the physiological responses and adaptations to acute and chronic exercise and training in the cardiovascular, pulmonary, metabolic systems.
Applied Physiology 2B	APSH2 B	100%	0%	6	15	The purpose of this module is for the learner to develop intellectual competencies and clinical skills in Exercise Physiology and the assessment of health and fitness.	The learner should be able to identify and explain the physiological responses and adaptations to acute and chronic exercise and training in the neuro-musculoskeletal, endocrine and thermoregulatory systems.
Applied Sport and Exercise Psychology 2A	ASPSH2 A	100%	0%	6	15	On completion of this module, students will be able to demonstrate an understanding of the role of sport and exercise psychology in	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the role of sport and exercise psychology in society,</li> </ul>

						<p>society, explain the basic principles, theories and methodologies of sport and exercise psychology, describe how sport psychology can enhance performance, identify techniques to modify exercise behaviour in individual athletes and enhance performance, and Explain the importance of group processes to enhance performance.</p>	<ul style="list-style-type: none"> <li>• Explain the basic principles of sport and exercise psychology.</li> <li>• Explain and demonstrate understanding of the theories and methodologies of sport and exercise psychology.</li> <li>• Describe how sport psychology can enhance performance.</li> <li>• Identify techniques to modify exercise behaviour in individual athletes. At the end of this unit learners should be able to understand and explain the importance of group processes to enhance performance.</li> </ul>
Didactics and Coaching Science 1B	DICSH1B	100%	0%	5	15	<p>The purpose of this module: Students will have an understanding of the education and training structures for sport in South Africa. Furthermore, is to acquire knowledge and practical skills in the didactical competencies related to the planning, preparation, presentation and assessment within the sport, recreation and rehabilitation context.</p>	<ul style="list-style-type: none"> <li>• Define curriculum, identify the different forms and types of curricula.</li> <li>• Identify the 6 steps for curriculum development.</li> <li>• Understand how the selection and development of content takes place within the design of a curriculum.</li> <li>• Explain the concept of a spiral curriculum and how it can inform your teaching of concepts to clients in your discipline.</li> <li>• Begin to develop your own curricular for learning sign language</li> <li>• Identify the 4 stages of Piaget's cognitive development.</li> <li>• Compare the differences and commonalities between Vygotsky and Piaget,</li> <li>• Explain differences between Bruner and Piaget.</li> <li>• Explain the 6 stages of moral development according to Kohlberg.</li> <li>• Identify the various stages of learning within yourself on your journey to learning a new</li> </ul>

						<p>language (sign language).</p> <ul style="list-style-type: none"> <li>• Explain the functional learning model proposed by Fitts &amp; Postner (1967).</li> <li>• Understand the 7 levels of learning.</li> <li>• Apply the hierarchy of learning to a basic sport skill.</li> <li>• You are teaching a new sport skill will be done using sign language to communicate to your peers a specific sport skill.</li> <li>• Explain the different modes of assessment.</li> <li>• Develop a rubric for assessing a sport skill.</li> <li>• Develop a rubric to assess peers on their use of sign language</li> <li>• Formulate ideas about alternative forms of assessment.</li> </ul>
Health and Wellness Promotion 1B	HWPSH1 B	100%	0%	5	15	<p>Learners should develop intellectual capabilities and practical skills in the field of health and wellness. This module focuses on the principles of good physical, mental, and social well-being which includes disease prevention and control, as well as personal fitness. A basic introduction to wellness and injury prevention in sport will also be presented. Learners will further be taught how to conduct physical measurements during an evaluation of an athlete/client during the (4th term) as well as how to interpret each result.</p> <ul style="list-style-type: none"> <li>• Define wellness related to the dimensions of wellness and identify behaviours contributing to the development of disease.</li> <li>• Identify destructive health behaviours and strategies to achieve optimal health</li> <li>• Give a brief overview of sport injuries.</li> <li>• Understand the basis of injury prevention and treatment</li> <li>• Describe the importance of health screening during pre-participation in exercise.</li> <li>• Identify the indications of various diseases a participant might possess.</li> <li>• Recommendations provided for safe testing.</li> <li>• Describe the contraindications to exercise testing, participant consent and participant instructions before exercise.</li> <li>• Identify the steps in a full anthropometrical Assessment of an athlete and be able to develop an athlete profile</li> </ul>

							<p>through examples of data</p> <ul style="list-style-type: none"> <li>• Describe the components of a comprehensive health fitness evaluation.</li> <li>• Become familiar with the basic principles and guidelines for a health-related physical fitness testing.</li> <li>• Identify the major physical fitness components prominent in athletic performance evaluation.</li> <li>• Diligence in selecting the appropriate test to measure fitness components.</li> </ul>
Health and Wellness Promotion 2B	HWPSH2 B	100%	0%	6	15	<p>Learners should develop intellectual capabilities and practical skills in the field of health and wellness. This module focuses on preparing for exercise and exercise adherence, developing and implementing physical activity plans, surveillance and physical activity measurement.</p>	<ul style="list-style-type: none"> <li>• Define Wellness in terms of the wellness wheel.</li> <li>• Revisit the wellness paradigm, with applicable examples.</li> <li>• Identify the four leading causes of premature death in RSA.</li> <li>• Discuss Hypokinetic diseases and levels of physical activity.</li> <li>• Distinguish between health and performance related fitness components.</li> <li>• Discuss the factors affecting the risk of injury due to physical activity participation.</li> <li>• Define pre-exercise/participation health screening methods (MR.PLEASE, PAR-Q,HSQ )</li> <li>• Apply the ACSM pre-participation screening algorithm for subjects who do not exercise regularly.</li> <li>• Identify the risk factors for coronary artery disease.</li> <li>• Discuss the general goals that good health aims to achieve.</li> <li>• Define the terms Health, Health Promotion, Exercise, Illness, Illness prevention, chronic disease, disease/illness treatment, time dependent aging and</li> </ul>

						<p>Lifestyle in relation to human life.</p> <ul style="list-style-type: none"> <li>• Distinguish between structured and incidental daily physical activity/exercise through the use of examples.</li> <li>• Discuss the concept of total fitness.</li> <li>• Describe the dependency of wellness on good physical fitness.</li> <li>• Use examples of common educational strategies to reach health targets.</li> <li>• Discuss the various coaching strategies used in the 5 stages of readiness in behavioural change.</li> <li>• Identify the positive and negative variable affecting the readiness for behavioural change.</li> <li>• List and describe the social determinants of health with accompanying examples</li> <li>• Use examples to describe the difference between equity and equality</li> <li>• Briefly, discuss why we need to pay attention to the social determinants of health</li> <li>• Identify how the determinants may affect the health of individuals.</li> <li>• Identify destructive lifestyles and their implications to a lack of wellness.</li> <li>• Discuss the lifestyle modifications that individuals should focus on.</li> <li>• List the popular screening processes for non-communicable disease.</li> <li>• Identify the possible screening components that forms part of a wellness day.</li> <li>• Identify and discuss the pointers to address when analysing wellness day results.</li> <li>• Discuss the stepwise approach to a worksite health promotion programme.</li> </ul>
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Health and Wellness Promotion 3A	HWPSH3 A	100%	0%	7	15	<p>The purpose is to prepare students to investigate the concept of exercise in medicine and be aware of the global trends in health promotion.</p>	<ul style="list-style-type: none"> <li>• Describe Physical activity value for health</li> <li>• Discuss the dangers of physical inactivity</li> <li>• Understand exercise recommendations for general well-being</li> <li>• Describe responses of acute exercise on serum lipids/ blood pressure/glucose</li> <li>• Identify the global trends in exercise for health.</li> <li>• Identify the physical signs of stress</li> <li>• Discuss the stress response to exercise</li> <li>• Apply coping strategies to stress management scenarios</li> <li>• Determine the mental health benefits of physical activity.</li> </ul>
Kinesiology 1A	KINSH1A	100%	0%	5	15	<p>Students should develop intellectual capabilities and practical skills in the field of skeletal and muscular anatomy, biomechanics, wellness and sport injuries. Learners should be able to identify the different skeletal and muscular structures and analyse simple joint movements. Learners should also be able to apply biomechanical principles in the fields of sport and human movement. Learners should also reflect on the role of the skeletal and muscular system during everyday activities, exercise, and sport.</p> <p>This module also focuses on the principles of good physical, mental, and social well-being which includes disease</p>	<ul style="list-style-type: none"> <li>• Use the appropriate terminology in anatomy and the correct terminology for the general movements of the body.</li> <li>• Identify the different aspects of each bone in the major joints of the upper limb.</li> <li>• Identify the major joints of the lower limb.</li> <li>• Identify the different sections/curves of the spinal column.</li> <li>• Explain certain key concepts and definitions in the field of Biomechanics, e.g. planes, axes, directional terminology and joint movements.</li> <li>• Analyse a movement in terms of the phase of the movement, the joints involved, the specific movements that take place, the agonistic and antagonistic muscles, as well as the types of muscle contraction (Anatomical analysis).</li> <li>• Use the correct biomechanical terminology and explain the concept of levers.</li> <li>• Perform simple calculations.</li> </ul>

						prevention and control, and personal fitness. A basic introduction to injury prevention in sport.	
Motor Learning 3A	MTLSH3 A	100%	0%	7	15	<p>The purpose of this module is to analyze motor development across the life span from infancy through older adulthood. Movement patterns and their developmental sequences, and the underlying mechanisms that are related to changes in these aspects will be studied. The processes of acquiring new skills and movement patterns and the correction of faulty movement patterns will be addressed. Learning will be facilitated with class discussions and examples; this will allow the learner to implement theory in real-life.</p>	<ul style="list-style-type: none"> <li>• Explain the concept of motor development.</li> <li>• Discuss different perspectives, such as maturational, information processing and ecological.</li> <li>• Understand and discuss the principles of motion and stability.</li> <li>• Discuss the development of various locomotor skills across the life span.</li> <li>• Explain the different developmental systems from prenatal to older adulthood.</li> <li>• Discuss the role and development of balance and postural control.</li> <li>• Explain the different sociocultural constraints, in terms of race, ethnicity and socioeconomic status.</li> </ul>
Notational Analysis and Exercise Science Programming 3B	NAPSH3 B	100%	0%	7	15	<p>This module aims to inform students about the various methods used in the scientific analysis and interpretation of match data.</p>	<ul style="list-style-type: none"> <li>• Design and construct a notational analysis framework including key performance indicators for sport performance monitoring and reporting.</li> <li>• Critically review technologies commonly used in notational analysis for sport</li> <li>• Assess contemporary issues in sports performance analysis, ethics, youth and developmental sports</li> </ul>
Nutrition 1A	NUT012A	100%	0%	6	15	<p>The purpose of this module is to acquire knowledge with respect to the important role of</p>	<ul style="list-style-type: none"> <li>• Describe how various factors influence personal food choices.</li> </ul>

					<p>nutrition in exercise, sport and performance. The module focuses on the basic principles of nutrition and on its role in enhancing athletic performance. Learners should also have a basic knowledge of nutritional supplements and banned substances within sport and exercise. These are fundamental concepts and additional reading is required to further increase knowledge.</p>	<ul style="list-style-type: none"> <li>• Describe the South African Food based dietary guidelines.</li> <li>• Name the 6 classes of nutrients and classify them as macro or micronutrients.</li> <li>• Identify the monosaccharides, disaccharides and polysaccharides common in nutrition by their major food source.</li> <li>• Describe the mechanisms of Carbohydrate metabolism (Glycolysis, Gluconeogenesis)</li> <li>• Explain Carbohydrate Utilization during exercise.</li> <li>• Identify and describe the Central nervous system Theories.</li> <li>• Give the recommended Carb intake/requirements for the general public, athletes.</li> <li>• Understand and describe the glycemic index of food (GI).</li> <li>• Describe how various factors influence personal food choices.</li> <li>• Describe the South African Food based dietary guidelines</li> <li>• Name the 6 classes of nutrients and classify them as macro or micronutrients</li> <li>• Identify the monosaccharides, disaccharides and polysaccharides common in nutrition by their major food source.</li> <li>• Describe the mechanisms of Carbohydrate metabolism (Glycolysis, Gluconeogenesis)</li> <li>• Explain Carbohydrate Utilization during exercise</li> <li>• Identify and describe the Central nervous system Theories</li> </ul>
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							<ul style="list-style-type: none"> <li>• Give the recommended Carb intake/requirements for the general public, athletes</li> <li>• Understand and describe the glycemic index of food (GI)</li> <li>• Identify food sources for the major vitamins and minerals</li> <li>• Discuss how exercise may increase the need for micronutrients in active individuals.</li> <li>• Identify the micronutrients most likely to be low in the diets of active individuals</li> <li>• Identify dietary patterns that lead to low energy intakes and potentially micronutrient deficiencies.</li> <li>• Discuss the role that energy intake has on the intake of micronutrients.</li> <li>• Discuss the role zinc, iron, folate and vitamin B12 play in haemoglobin synthesis.</li> <li>• Discuss the impact of poor iron status on exercise performance.</li> <li>• Describe the nutrients important for bone health and their function.</li> </ul>
Principles of Coaching 2A	PRCSH2 A	100%	0%	6	15	Introduce basic principles of coaching science and its application to a range of sports.	<ul style="list-style-type: none"> <li>• Briefly explain the rationale why a philosophy is needed in the context of coaching.</li> <li>• Discuss how life events can affect a coaching philosophy Briefly discuss the development of a coaching philosophy.</li> <li>• Discuss self-awareness as an important component in developing a coaching philosophy.</li> <li>• Explain the self-concept principal concept with reference to</li> </ul>

						<p>the three selves of a person.</p> <ul style="list-style-type: none"> <li>• Briefly discuss self-esteem as an important component in the development of a useful coaching philosophy.</li> <li>• Briefly discuss self-disclosure as a component in the development of a coaching philosophy.</li> <li>• Gain a significant insight into three major coaching objectives.</li> <li>• Discuss society's objectives for sport programmes.</li> <li>• Discuss the compatibility of coaching objectives with that of society.</li> <li>• Discuss winning as an objective in sport.</li> <li>• Develop personal objectives for coaching.</li> <li>• Name and discuss the three coaching styles most coaches adopt.</li> <li>• Define leadership. What is the difference between leadership and management.</li> <li>• Discuss in what ways a leader should not only address the physical but also the psychological and social environments of athletes.</li> <li>• Explain how a coach should provide direction to his/her athletes. Is the focus on the steps that lead to winning as well as other goals? Name and discuss the components of a team culture. How can a positive team culture be fostered and how can</li> </ul>
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							<p>athletes be included in its creation?</p> <ul style="list-style-type: none"> <li>Briefly discuss suggested behavioural guidelines in coaching (Codes of ethics).</li> </ul>
Psychology 1A: Fundamentals	PSY1AA1	50%	50%	5	16	<p><b>Humanities module</b></p> <p>This module introduces students to the fundamentals of psychology. It is aimed at providing students with a broad theoretical knowledge for further learning.</p>	<p><b>Humanities module</b></p> <p>Explain what memory is.</p> <ul style="list-style-type: none"> <li>List and describe the three basic human memory processes.</li> <li>Explain the Atkinson and Shiffrin model of memory.</li> <li>Discuss issues and constructs related to encoding, including the role of sensory memory and short-term memory</li> <li>Discuss issues and constructs related to storage, including the role of long-term memory.</li> <li>Describe issues related to retrieval, including failure to retrieve accurately.</li> <li>Explain why we forget.</li> <li>Briefly discuss the role of the brain in long-term memories.</li> <li>List ways in which one can improve memory.</li> </ul>
Psychology 1B: Fields of Psychology	PSY1BB1	50%	50%	5	16	<p><b>Humanities module</b></p> <p>Introduces the learner to major fields in psychology, issues related to these fields.</p>	<p><b>Humanities module</b></p> <ul style="list-style-type: none"> <li>Explain and evaluate theories in developmental psychology</li> <li>Explain and evaluate theories in personality psychology</li> <li>Explain and evaluate theories in social psychology</li> </ul>
Psychology 2A: Developmental Psychology	PSY2AA2	50%	50%	6	16	<p><b>Humanities module</b></p> <p>Introduces the basic principles of human development, which assists in learner conceptualisation of the human body from birth to death.</p>	<p><b>Humanities module</b></p> <ul style="list-style-type: none"> <li>Have a working knowledge base of developmental psychology.</li> <li>Have a sound understanding of the key terms, concepts, established principles and theories in</li> </ul>

							<p>developmental psychology;</p> <ul style="list-style-type: none"> <li>• Awareness of how the field of study relates to other areas such as abnormal psychology, cognitive psychology, and social psychology;</li> <li>• A critical analysis and synthesis of information</li> <li>• Presentation of information using basic information gained during the study of human development theories.</li> <li>• Develop cognitive skills that enable adaptive participation within academic context</li> <li>• Apply the study material to everyday personal, social, familial and cultural contexts; and</li> <li>• Understand diversity in human psychological and social life and develop values of tolerance and respect for difference.</li> </ul>
Psychology 2B: Positive Psychology	PSY2DB2	50%	50%	6	16	<p><b>Humanities module</b></p> <p>Provide basic knowledge of theory and concepts of the emerging field of positive psychology.</p>	<p><b>Humanities module</b></p> <ul style="list-style-type: none"> <li>• Distinguish between principles of positive psychology and other principles of psychology</li> <li>• Identify and describe the core concepts of positive psychology</li> <li>• Reflect on applications of positive psychology</li> <li>• Identify research that supports the principles, strategies and skills of positive psychology</li> </ul>
Psychology 3A: Research Psychology	PSY3AA3	50%	50%	7	16	<p><b>Humanities module</b></p> <p>Introduces students to advanced</p>	<p><b>Humanities module</b></p> <ul style="list-style-type: none"> <li>• Differentiate between experimental and</li> </ul>

						research design in the behavioural sciences. Familiarise learners with the description and manipulation of data using data analysis software.	non-experimental designs <ul style="list-style-type: none"> <li>• Understand the varieties of experimental research design</li> <li>• Understand the varieties of non-experimental research design</li> </ul> Analysis through case study
Psychology 3B: Psychopathology	PSY3DB3	50%	50%	7	16	<b>Humanities module</b>  To develop conceptual understanding of the multi-dimensional.	<b>Humanities module</b> <ul style="list-style-type: none"> <li>• Application of multi-dimensional approach to psychopathology</li> <li>• Critically discuss historical approaches to understanding psychopathology</li> <li>• Describe current approaches including assessment, diagnostic practices and treatment modalities</li> <li>• Describe the clinical picture of major psychological disorder categories</li> <li>• Differentiate between the major psychological disorder categories</li> <li>• Explain the multi-dimensional aetiological contributions to the development and presentation of psychological disorders</li> <li>• Critically discuss current trends in the understanding of psychopathology.</li> </ul>
Sport and Exercise Practice 1B	SEPSH1B	100%	0%	5	8	The purpose of this module is to introduce students to the interpretation, analysis and application of the rules and assessment in the sporting codes of	<ul style="list-style-type: none"> <li>• Explain the Rules and Regulations of the game.</li> <li>• Identify the Equipment used.</li> <li>• Illustrate dimensions of the playing Field .</li> <li>• Identify Playing Positions and their roles.</li> <li>• Conduct a needs analysis of sport.</li> </ul>



						Basketball, Cricket, Soccer, Netball, Hockey and Rugby.	<ul style="list-style-type: none"> <li>• Evaluation of the Sport.</li> <li>• Movement/biomechanical analysis.</li> <li>• Physiological analysis/ Injury analysis.</li> <li>• Application of training principles.</li> </ul>
Sport and Exercise Science 3A	SESSH3 A	100%	0%	7	15	The purpose is to address the physical fitness components of the athlete and the importance of it in sport.	Learners should develop intellectual competencies and practical skills in the analysis, interpretation and application of exercise science principles in the fitness and health-, coaching and teaching sectors of the sport industry.
Sport and Exercise Science 3B	SESSH3 B	100%	0%	7	15	The purpose is to address the physical fitness components of the athlete and the importance of it in sport.	Learners should develop intellectual competencies and practical skills in the analysis, interpretation and application of exercise science principles in the fitness and health-, coaching and teaching sectors of the sport industry.
Sport and Exercise Science Practice 3B	SEPSH3 B	100%	0%	7	15	The purpose of this module is to acquire the knowledge needed to diligently conduct measurement and evaluation techniques in sport with the comprehensive application of exercise science theories, principles and concepts to the result findings. The programme serves to develop your understanding and integration of theory into tangible application within a sporting context.	Students should be able to apply knowledge on, and conduct measurement and evaluation techniques in sport with the comprehensive application of exercise science theories, principles and concepts to the result findings.
Talent Identification and Long-Term Athlete Development 3A	TIDSH3A	100%	0%	7	15	Purpose: aims to introduce students to talent identification and development and	<ul style="list-style-type: none"> <li>• Demonstrate and understanding of natural gift and talent</li> <li>• Distinguish between what talent ID from a</li> </ul>

						<p>how it has been historically approached and misused</p> <p>Focus on the reconciliation of both mass participation and talent development.</p>	<p>multi-disciplinary perspective</p> <ul style="list-style-type: none"> <li>Define and discuss ethical challenges of long-term athlete development.</li> </ul>
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## BACHELOR OF BIOKINETICS (B9S05Q)

Name	Code	SM Weight	EM Weight	Level	Credits	Purpose	Content
Anatomy and Physiology 1	AAP01Y1	100%	0%	5	30	<p>The qualification serves as a foundation and core knowledge base whereby the acquisition of professional abilities such as competence, skills, values and attitudes are ensured, as well as gaining applied competence to act as a specialist health care professional, namely a Biokineticist, should prove to be the end product. Competent and qualified Biokineticists are able to work in a variety of settings, including the public and private sector and in both urban and rural settings. Biokineticists primarily utilise their professional expertise in exercise, physical activity and health education to enhance/promote health in general, and specifically prevent dysfunction, restore and maintain an</p>	<p>Anatomy and Physiology provide foundational knowledge for pathology and clinically related subjects. The content covered in this module includes an introduction to anatomy and physiology; chemistry and the cell; basic histology; the skin, bones and joints; muscle; and the nervous, endocrine, cardiovascular, respiratory, urinary systems, Digestive system and reproductive system.</p>

						individual's compromised functional ability, particularly in respect of orthopaedic injury and chronic disease states. The qualification will provide all economic sectors with a pool of well-qualified people whose competence will be internationally recognised and who will be able to perform specialised biokinetic health care services within any community setting. The Professional Qualification: Health Professional-Biokineticist is distinct from other qualifications in the health care profession as its main focus is scientifically based prescriptive exercise in the four domains of practice.	
Anatomy and Physiology 2	AAP01Y2	100%	0%	6	30	The qualification serves as a foundation and core knowledge base whereby the acquisition of professional abilities such as competence, skills, values and attitudes are ensured, as well as gaining applied competence to act as a specialist health care professional, namely a Biokineticist, should prove to be the end product. Competent and qualified Biokineticists are	Anatomy and Physiology provide foundational knowledge for pathology and clinically related subjects. The content covered in this module includes Musculoskeletal (bones, joints, muscles).

						<p>able to work in a variety of settings, including the public and private sector and in both urban and rural settings. Biokineticists primarily utilise their professional expertise in exercise, physical activity and health education to enhance/promote health in general, and specifically prevent dysfunction, restore and maintain an individual's compromised functional ability, particularly in respect of orthopaedic injury and chronic disease states. The qualification will provide all economic sectors with a pool of well-qualified people whose competence will be internationally recognised and who will be able to perform specialised biokinetic health care services within any community setting. The Professional Qualification: Health Professional-Biokineticist is distinct from other qualifications in the health care profession as its main focus is scientifically based prescriptive exercise in the four domains of practice.</p>	
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Biokinetics 1	BIK01Y1	100%	0%	5	30	<p>The purpose of this module is to introduce the student/learner to the field of Biokinetics, the human body, health and fitness.</p> <ul style="list-style-type: none"> <li>· Describe where and how the Biokinetics profession developed and how it fits into the SA health care industry.</li> <li>· Identify selected ethical and legal issues involved in being a Biokineticist.</li> <li>· Demonstrate a functional understanding of the neuro-musculoskeletal system.</li> <li>· Perform simple anatomical analyses of common movements.</li> <li>· Explain the role of exercise and screening in promoting wellness and in preventing certain non-communicable diseases.</li> <li>· Conduct and interpret basic health and physical fitness assessments.</li> <li>· Apply the FITT-VP principle to exercise prescription for healthy populations</li> <li>· Identify the symptoms, aetiology and treatment of common sports injuries.</li> <li>· List basic prevention strategies used to prevent different sports injuries.</li> <li>· Explain the 3 different rehabilitation</li> </ul>
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							phases used in Biokinetics.
Biokinetics 2	BIK01Y2	100%	0%	6	30	The purpose of this module is to learn more about the fields of wellness, chronic conditions, and lower limb conditions.	<p>1. Explain the importance of the 17 sustainable development goals (SDGs) and explain how SDGs apply in the context of Biokinetics in South Africa.</p> <p>2. Demonstrate an understanding of the impact that the social determinants of health has in the context of Biokinetics in South Africa.</p> <p>3. Reflect on the importance of corporate wellness programs from a Biokinetics perspective and how corporate environments incorporate these.</p> <p>4. Discuss the benefits and applications of the different types of therapeutic modalities within orthopaedics</p> <p>5. Explain the injury pathology, prevalence, symptoms, aetiology and treatment of lower limb injuries/conditions.</p> <p>6. Perform Biokinetic assessments of various lower limb orthopaedic injuries.</p> <p>7. Interpret the results of Biokinetic assessments of various lower limb injuries and design appropriate</p>

							<p>exercise rehabilitation programmes for patients with lower limb injuries by applying the FITT-VP principle for each of the three different phases of Biokinetic rehabilitation.</p> <p>8. Explain the criteria used to discharge a patient or to return an athlete to his/her sport.</p> <p>9. Discuss injury prevention strategies for the lower limb in Biokinetics.</p> <p>10. Explain the prevalence, symptoms, aetiology and treatment of chronic conditions (Hypertension/CAD ; Diabetes Mellitus; Obesity).</p> <p>11. Explain the Biokinetic assessment of various chronic conditions.</p> <p>12. Interpret the results of assessments of various chronic conditions.</p> <p>13. Discuss appropriate exercise programmes for patients with chronic conditions taking the FITT-VP principle into account.</p>
Biokinetics 3	BIK01Y3	100%	0%	7	30	<p>The purpose of this module is to develop theoretical and clinical reasoning skills in the different fields</p>	<ul style="list-style-type: none"> <li>• Recognize the causes, symptoms and prevalence of different conditions</li> <li>• Understand the different</li> </ul>

						of Biokinetics (Chronic Conditions, Wellness and Orthopaedics).	evaluations available for each condition <ul style="list-style-type: none"> <li>• Design rehabilitation interventions for different conditions</li> <li>• Screening and prevention of non-communicable diseases</li> <li>• Promotion of health</li> <li>• Reflect on the effectiveness of exercise and other therapeutic interventions.</li> </ul>
Biokinetics 4	BIK01Y4	100%	0%	8	30	The purpose of this module is for the learner to develop intellectual competencies related to the fields of Wellness, Orthopaedic Conditions and Chronic Diseases, and to reflect on the effectiveness of exercise in the prevention and treatment of these conditions. Learners should also become familiar with the analysis and discussion of case studies. In addition, learners should be able to integrate their knowledge during the interpretation and analysis of complex case studies to suggest appropriate assessments and interventions. Learners should have a detailed working knowledge of exercise in its different forms and which type of exercise to prescribe.	<ul style="list-style-type: none"> <li>• Discuss the approaches and involvement of a multidisciplinary team in Biokinetics rehabilitation.</li> <li>• Discuss the Biokinetics treatment of different orthopaedic case studies presented.</li> <li>• Discuss the different rehabilitation modalities and protocols to follow pre- and post-operatively in various surgeries.</li> <li>• Discuss the role of exercise in special populations groups.</li> <li>• Analyse various chronic case studies (cardiovascular disease, diabetes type 1 &amp; 2, cardiopulmonary disease, HIV/AIDs, neurological diseases and cancer, use sound clinical reasoning and make informed decisions regarding the correct treatment required.</li> </ul>
Biokinetics Practice 1	BIO01Y3	100%	0%	7	65	Learners should develop intellectual competencies and practical skills in	<ul style="list-style-type: none"> <li>• Clinical skills training in wellness and health promotion</li> </ul>



						<p>the field of Biokinetics. They should be able to apply their theoretical knowledge in the practical aspects of Biokinetics and acquire the appropriate skills to practise in a variety of settings.</p>	<ul style="list-style-type: none"> <li>• Clinical skills training in the management of chronic conditions</li> <li>• Clinical skills training in the rehabilitation of orthopaedic conditions</li> <li>• Completion of 350 hours of clinical rotations at UJ and approved clinical sites</li> </ul>
Biokinetics Practice 2	BIO01Y4	100%	0%	8	65	<p>The purpose of this module is to develop practical clinical skills in the following field: Wellness, Orthopaedic Conditions, and Chronic Conditions. Learners should develop advanced clinical skills in assessment techniques, intervention strategies and the re-assessment of patients. At the end of this module, the student should be able to function as an independent biokineticist, able to perform all acts required from a biokineticist.</p>	<ul style="list-style-type: none"> <li>• Demonstrate and evaluate the Functional Movement Screen (FMS).</li> <li>• Scientifically assess static and dynamic balance abilities and prescribe exercises accordingly.</li> <li>• Explain the uses of various imaging techniques.</li> <li>• Demonstrate various advanced rehabilitation exercise techniques and apply them correctly in Biokinetics practice.</li> <li>• Effectively demonstrate, evaluate and interpret advanced isokinetic assessments and training.</li> <li>• Be competent in using EMS and EMG in Biokinetic assessment and rehabilitation.</li> <li>• Conduct various advanced chronic skills, such as blood analysis, spirometry techniques, ECG.</li> <li>• Conduct advanced assessments and</li> </ul>

							rehabilitation techniques with patients diagnosed various conditions such as cardiovascular disease, diabetes mellitus type 1 and 2, cardiopulmonary disease, HIV/AIDs, neurological disease and cancer.
Biokinetics Research: Mini Dissertation	BRD01Y4	100%	0%	8	30	The purpose of this module is to enable you with the skills and time to complete your research project in Biokinetics.	<ul style="list-style-type: none"> <li>· Design, implement and present a research article using PowerPoint at a journal club.</li> <li>· Implement and complete a research article of a particular study design.</li> <li>· Implement and present a summary of their research project using PowerPoint</li> </ul>
Biomechanics 1	BIM01B1	100%	0%	5	15	The purpose of this module is for the learner to develop intellectual competencies and clinical skills in Biomechanics and the assessment of health and fitness. The learner should be able to solve basic biomechanical problems, perform basic biomechanical analyses and be able to assess basic health and fitness components.	<ul style="list-style-type: none"> <li>· Understand how biomechanics integrates with the disciplines of exercise physiology, motor behaviour, ergonomics, physical therapy, sports medicine, pedagogy, and adaptive physical education.</li> <li>· Define system and understand how to specify the system in biomechanical analyses.</li> <li>• Understand the concept of qualitative motion analysis and its components.</li> <li>• Define the interaction of forces and systems</li> <li>• Define kinematics and kinematic</li> </ul>

							<p>concepts, including displacement, velocity, direction, and acceleration.</p> <ul style="list-style-type: none"> <li>• Define angular motion of the system</li> <li>• Discuss the biomechanics of the musculoskeletal system</li> </ul>
Clinical Exercise Science	CEX01B3	100%	0%	7	15	<p>The purpose of this module is to equip learners with clinical knowledge and skills in the fields of Pathophysiology and Clinical or Applied Exercise Science and in Biokinetics in order to treat a variety of conditions in different patients using exercise as the therapeutic treatment modality. Learners should also be able to assess, interpret and prescribe scientific and individualised exercise programs to a variety of patients e.g., children, women, the elderly, different chronic and/or orthopaedic patients.</p>	<ul style="list-style-type: none"> <li>• Describe the concepts and processes surrounding clinical reasoning.</li> <li>• Explain the uses and effects of different pharmacological agents on chronic disease patients' abilities to exercise.</li> <li>• Describe the pathophysiology, risk factors, symptoms, assessment and treatment of different chronic diseases and conditions.</li> <li>• Apply the FITT-VP principles to exercise prescription and discuss the role of exercise in different special populations (children, pregnancy and older persons).</li> </ul>
Exercise Physiology	EXP01Y2	100%	0%	6	30	<p>The purpose of this module is for the learner to develop intellectual competencies and clinical skills in Exercise Physiology and the assessment of health and fitness.</p>	<p>The learner should be able to identify and explain the physiological responses and adaptations to acute and chronic exercise and training in the neuro-musculoskeletal, neurological,</p>

							cardiovascular, pulmonary, metabolic, endocrine and thermoregulatory systems.
Exercise Science	EXS01A3	100%	0%	7	15	Learners should develop intellectual and practical competencies in the field of Exercise Science. Students should also be able to apply their theoretical knowledge within the scope of Biokinetics.	<p>1. Discuss the different components of health-related and performance-related fitness</p> <p>2. Design and conduct fitness assessments for the different fitness components</p> <p>3. Compile a written report for each person tested (pay attention to normative data)</p> <p>4. Describe in detail the most important training principles, e.g. progression, individualization, ...</p> <p>5. Discuss and compare the different types of exercise, e.g. flexibility training, isometrics, bodyweight training, elastic resistance training, weight-lifting, machine-based resistance training, isokinetics, plyometrics, water-based training, group training, Tai chi, Pilates, aerobic and anaerobic training, ...</p> <p>6. Describe the process of exercise planning and implementation</p> <p>7. Design appropriate exercise programs for improving</p>

							different fitness components  8. Evaluate the effectiveness of exercise programs by means of re-evaluation.
Nutrition 1	NUT01A1	100%	0%	5	15	The purpose of this module is to acquire knowledge and awareness with respect to the important role of nutrition in health and disease. The module focuses on the principles of nutrition for well-being, which includes disease prevention and control, and personal fitness. A basic introduction to nutrition will be presented. Learners should further be able to reflect on the role of the principles of nutrition and the lifestyle modification principles required for health promotion. These are fundamental concepts and additional reading is required to further increase knowledge.	<ul style="list-style-type: none"> <li>Describe how various factors influence personal food choices</li> <li>Describe the South African Food based dietary guidelines</li> <li>Name the 6 classes of nutrients and classify them as macro or micronutrients</li> <li>Discuss the body's regulation of fluid balance.</li> <li>Explain nutrition throughout one's lifespan.</li> <li>Discuss the role of nutrition in the prevention of overweight, obesity, diabetes, cardiovascular diseases, cancer, HIV/AIDs and in athletes.</li> </ul>
Practice Administration 1	PAM01A1	100%	0%	5	15	The purpose of this module is that learners should be able to understand the development of sport in the South African context, and to perform general first level management administrative responsibilities in a sport and recreation environment.	<ul style="list-style-type: none"> <li>Understand the place of sport in society</li> <li>Define sport and be able to analyse the basic requirements of an activity for classification purposes</li> <li>Understanding the functioning of the sport environment model</li> <li>Understand how management is a</li> </ul>

						<p>Learners should further be able to apply the management functions in the field of sport administration. The module is divided into two sections sport history and sport administration.</p>	<p>generic concept applicable to any sport organisation</p> <ul style="list-style-type: none"> <li>• Understand the nature and advantages of planning in a sport organisation.</li> <li>• Describe the steps in the planning process and apply the process in a sport organisation.</li> <li>• Understanding the management task of organising</li> <li>• Understanding the nature of leadership in a sport organisation.</li> <li>• Analyse the frequency with which control must take place and the applicable method of control that should be used</li> </ul>
Perceptual Motor Behaviour	PMB01Y2	100%	0%	6	30	<p>The purpose of this module is to analyse motor development across the life span from infancy through older adulthood. Movement patterns and their developmental sequences, and the underlying mechanisms that are related to changes in these aspects will be studied. The processes of acquiring new skills and movement patterns and the correction of faulty movement patterns will be addressed. Learning will be facilitated with class discussions and examples; this will allow the learner to implement theory in real-life.</p>	<ul style="list-style-type: none"> <li>• Explain the concept of motor development.</li> <li>• Discuss different perspectives, such as maturational, information processing and ecological.</li> <li>• Understand and discuss the principles of motion and stability.</li> <li>• Discuss the development of various locomotor skills across the life span.</li> <li>• Explain the different developmental systems from prenatal to older adulthood.</li> <li>• Discuss the role and development of balance and postural control.</li> <li>• Explain the different sociocultural constraints, in terms of race, ethnicity and socioeconomic status.</li> </ul>

Practice Management and Entrepreneurship	PME01A1	100%	0%	8	15	The purpose of this module is to establishment, management and administrative aspects of a biokinetics practice and to develop entrepreneurial skills within the health care industry.	<ul style="list-style-type: none"> <li>Describe the scope of practice for Biokinetics, identify the various ethical rules that govern the profession and understand the rights of patients.</li> <li>Understand the difference between the different business models.</li> <li>Understand the significance of establishing professional relationships with various stakeholders within the medical fraternity.</li> <li>Apply the guidelines of having a social media presence.</li> <li>Define malpractice insurance and understand how it fits into the Biokinetic practice.</li> <li>Understand the different skills required for establishing and managing a Biokinetic practice.</li> <li>Identify the steps to develop a simple business plan and marketing plan</li> <li>Understand health policy, health systems and structures, capacity building and interdisciplinary healthcare as required in South African legislation.</li> </ul>
Psychology 1A	PSY1AA1	50%	50%	6	15	<b>Humanities module</b>  Psychology 1A introduces students to the fundamentals of psychology. The module is aimed at providing students with a broad theoretical foundation for further studies in psychology. To this	<b>Humanities module</b>  Upon completion of this module students should be able to: <ul style="list-style-type: none"> <li>explain the nature and origins of psychology and critically differentiate between the major</li> </ul>

					<p>end students encounter topics that encompass three interrelated explanatory approaches, namely biological, e.g. the role of the brain in human behaviour; psychological, e.g. cognition, motivation, and emotion; and environmental explanations, e.g. socio-cultural influences.</p>	<p>perspectives associated with the field of psychology;</p> <ul style="list-style-type: none"> <li>• describe the nature of scientific psychology, including ethical issues, and be able to differentiate between major research strategies;</li> <li>• discuss the role of the nervous system in human functioning;</li> <li>• describe the processes of sensation and perception and evaluate the role of these processes in everyday functioning;</li> <li>• differentiate between various states of consciousness and the implications of these states for human functioning;</li> <li>• distinguish between classical, operant, and observational learning and describe various processes associated with each;</li> <li>• explain various processes and models underlying human memory and evaluate the importance of each;</li> <li>• discuss core issues related to human motivation and evaluate various theories of emotions, including the interplay between motivation and emotion.</li> </ul>
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Psychology 1B	PSY1BB1	50%	50%	6	15	<b>Humanities module</b>  Psychology 1B introduces students to major fields in psychology. The module is aimed at providing students with an introduction to four defining fields in contemporary psychology, namely developmental psychology, personality psychology and social psychology. Familiarity with the major concepts and issues related to each of these fields should enable students to engage with these fields at an advanced level in further studies.	<b>Humanities module</b>  Upon completion of this module students should be able to: <ul style="list-style-type: none"> <li>• Explain and critically evaluate various issues, theories, and concepts in Developmental Psychology.</li> <li>• Explain and critically evaluate various issues, theories, and concepts in Personality Psychology.</li> <li>• Explain and critically evaluate various issues, theories, and concepts in Social Psychology.</li> <li>• Explain and critically evaluate various issues, theories, and concepts in Health Psychology.</li> <li>• Explain and critically evaluate various issues, theories, and concepts in Psychopathology.</li> </ul>
Research Methodology	RME01A3	100%	0%	7	15	This module is aimed at encouraging the student to conduct research by giving them the required knowledge of specific approaches and methods (qualitative and quantitative) and skills employed in applied research.	<ul style="list-style-type: none"> <li>• Describe and understand the principles underpinning a successful research proposal.</li> <li>• Understand and apply techniques when searching and reading for scientific literature.</li> <li>• Understand, differentiate and apply principles of quantitative and qualitative research methods.</li> <li>• Discuss the importance and implications of research ethics.</li> </ul>

							<ul style="list-style-type: none"> <li>Formulate and conduct sound research presentations using PowerPoint slides.</li> <li>Understand and perform data analysis in various methodologies.</li> <li>Understand the concepts of a null hypothesis, alternative hypothesis, type I error and type II error.</li> </ul>
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**BACHELOR OF COMMERCE HONOURS IN SPORT MANAGEMENT (H9S05Q)**  
**BACHELOR OF ARTS HONOURS IN SPORT SCIENCE (H9S03Q)**

<b>Name</b>	<b>Code</b>	<b>SM Weight</b>	<b>EM Weight</b>	<b>Level</b>	<b>Credits</b>	<b>Purpose</b>	<b>Outcome</b>
Exercise Physiology	HMS8X08	100%	0%	8	18	The purpose of this module is to acquire knowledge and develop your understanding and intellectual competencies of relevant physiological theories, principles and concepts relevant to the sport phenomenon.	Learners should develop intellectual competencies in the analysis, interpretation and application of physiological principles in the fitness and health-, coaching and teaching sectors of the sport industry.
Exercise Science	HMS8X09	100%	0%	8	18	The purpose of this module is to acquire knowledge and develop your understanding and intellectual competencies of relevant exercise science theories, principles and concepts relevant to the sport phenomenon.	Learners should develop intellectual competencies and practical skills in the analysis, interpretation, and application of exercise science principles in the fitness and health-, coaching and teaching sectors of the sport industry.
Facility and Event Management	HMS8X12	100%	0%	8	15	To obtain relevant knowledge, skills, competencies and attitudes in the development and	Learners should be able to debate factors that should be concerned in the development of a

						management of sport facilities.	sport facility; Describe and analyse the different systems and operational aspects of a sport facility. Develop an event management plan at a sport facility; Argue the components of an effective facility administration system; and to design a risk plan as well as a monitoring and evaluation system for a sport facility.
Human Resource Management in Sport	HMS8X13	100%	0%	8	12	To obtain relevant knowledge, skills, competencies, and attitudes in the management of human resources in sport.	Learners should be able to discuss and argue the different human resources in the sport industry; Debate the roles of volunteers and volunteerism in sport; Apply leadership and motivational theories in the sport context; Position the human resources environment within the legislative environment in South Africa; and to apply the concepts of talent identification, recruitment, induction, and remuneration within the context of sport.
Research Methodology	HMS8X03	100%	0%	8	30	This module is aimed at encouraging the student to conduct research by giving them the required knowledge of specific approaches and methods (qualitative and quantitative) and skills employed in applied research.	Learners should be able to describe and debate the principles underpinning a successful research proposal; Apply techniques when searching and reading scientific literature; Differentiate and apply principles of quantitative and qualitative research methods.  Discuss the importance and

							<p>implications of research ethics.</p> <p>Formulate and conduct sound research presentations using PowerPoint slides; Perform data analysis in various methodologies; and debate the concepts of a null hypothesis, alternative hypothesis, type I error and type II error.</p>
Sport Finance	HMS8X15	100%	0%	8	12	To obtain relevant knowledge, skills, competencies, and attitudes in the management of financial resources in the sport industry.	Learners should be able to develop and analyse financial statements; Develop strategies for financing sport organisations and/or initiatives; Describe and develop the time value of money; and compile and analyse budgets, including current and capital budgets.
Sport Management Practice	HMS8X16	100%	0%	8	18	To obtain relevant knowledge, skills, competencies, and attitudes in the practice of the management of sport.	Learners should be able to experience sport environments that relates to the theoretical training of the programme; Apply theoretical knowledge in a practical sport situation; Shadow experienced sport managers in different sport contexts; Engage in discussions with peers on the practical application of learned theory; and reflect on the practical environment of a sport manager.
Sport Marketing	HMS8X14	100%	0%	8	12	To obtain relevant knowledge, skills, competencies, and attitudes in the marketing of and through sport.	Learners should be able to develop a marketing plan for a sports organisation and/or project; Assess and evaluate

							the effects of a marketing plan in sport and recreation environments; Distinguish between marketing of sport and marketing through sport; and describe and debate disciplines and practices of Sport Marketing in a holistic context of marketing
Sport Psychology	HMS8X10	100%	0%	8	12	The purpose of this module is to introduce students to the basic tenants of sport psychology including psychological readiness for peak performance (including competition and training), social facilitation, stress, anxiety and motivation as interventions for performance. Students will also examine antidoping and mental toughness in sport.	Learners should understand the major sport psychological themes, the psychology of peak performance, talent detection and development, exercise psychology, intervention strategies for exercise adherence, drug abuse in sport, and career termination/transition in sport.
Sport Science Practice	HMS8X11	100%	0%	8	30	The purpose of this module is to acquire the knowledge needed to diligently conduct measurement and evaluation techniques in sport with the comprehensive application of exercise science theories, principles and concepts to the result findings. The programme serves to develop your understanding and integration of theory into tangible application within a sporting context.	Students should be able to apply knowledge on and conduct measurement and evaluation techniques in sport with the comprehensive application of exercise science theories, principles and concepts to the result findings.
Sport Sociology	HMS8X17	100%	0%	8	12	To obtain relevant knowledge, skills, competencies, and attitudes in the context of sport related to sport in society, politics,	Learners should be able to reflect on the value of the study of sport in society within the context of production; Argue the

						gender, race, ability, commercialization, and different models in sport.	theoretical approaches to different issues in sport and society – politics of sport, sport nationalism and national identity, economy in sport and its relationship with transnational companies, sponsorships and commercialization; Debate the reciprocal role of the media in sport within the global context; Explain sport related violence in the context of society utilizing case studies; and distinguish between the sport+ and +sport models.
Sport Vision	HMS8X19	100%	0%	8	15	After completion of this module learners should be able to recognise and differentiate the various visual-perceptual and visual-motor abilities. They should be able to appreciate inter-relationships of ocular and motor systems and recognise and identify underlying systemic deficiencies on the basis of their visual manifestations. From this they should be able to design and implement different visual enhancement programs.	<p>Learners will be capable of independently demonstrating:</p> <p>The identification of visually related problems in sport and promote solving by improving visual requirements in sport.</p> <p>Work effectively with all stakeholders to promote effective vision in sport. Designing, organizing and managing interventions in practice as well as in the community.</p> <p>Skills as a consultant who can integrate scientific knowledge with clinical insight to diagnose and manage visual-motor disorders.</p> <p>Communication skills in effectively improving visual aspects involved in sport.</p>

							<p>The use of science and technology effectively for promoting the assessment and visual enhancement of participants in sport.</p> <p>Reflecting on and exploring various strategies in the practice, fieldwork, internet, and other sources, to learn more effectively.</p> <p>A contribution to a full range of opportunities in the sports science environment.</p>
Strategic Management in Sport	HMS8X18	100%	0%	8	12	To obtain relevant knowledge, skills, competencies, and attitudes in the strategic management of sport.	<p>Learners should be able to develop and analyse strategic approaches in sport organisations; A argue the relationship between the strategy, vision, mission, core values of the strategic plan of a sport organisation; Complete an environmental scanning and analysis as basis for a strategic analysis of a sport organisation; Debate and discuss the value and proposition of managing change in a sport organisation, utilizing examples from the recent decade; and to distinguish between leadership and organizational culture.</p>