DUT
DURBAN
UNIVERSITY OF
TECHNOLOGY

FACULTY OF
HEALTH
SCIENCES

2016 HANDBOOK
BASIC MEDICAL SCIENCES

HANDBOOK FOR 2016

FACULTY OF HEALTH SCIENCES

DEPARTMENT of BASIC MEDICAL SCIENCES

The above department services programmes, mainly in the Faculty of Health Sciences, and does not offer any programmes of its own.

Courses offered:
Anatomy
Pathology
Pharmacology
Physiology

This handbook offers information on these courses.

WHAT IS A UNIVERSITY OF TECHNOLOGY?

A university of technology is characterized by being research informed rather than research driven where the focus is on strategic and applied research that can be translated into professional practice. Furthermore, research output is commercialized, thus providing a source of income for the institution. Learning programmes, in which the emphasis on technological capability is as important as cognitive skills, are developed around graduate profiles as defined by industry and the professions.

NOTE TO ALL REGISTERED STUDENTS

Your registration is in accordance with all current rules of the Institution. If, for whatever reason, you do not register consecutively for every year/semester of your programme, your existing registration contract with the Institution will cease. Your re-registration anytime thereafter will be at the discretion of the institution and, if permitted, will be in accordance with the rules applicable at that time.

IMPORTANT NOTICES

The rules in this departmental handbook must be read in conjunction with the General Rules (G Rules) contained in the DUT General Handbook for Students as well as the relevant subject Study Guides.

Your attention is specifically drawn to Rule G1 (8), and to the process of dealing with students issues.

FACULTY of HEALTH SCIENCES

FACULTY VISION, MISSION, GOALS & VALUES

(November 2012 for 2013-2017)

Vision

Our vision is to be a leading Faculty in transformative and innovative education for health professionals, guided by National imperatives and a strong commitment to socially responsive education. We will strive for excellence in professional and teaching scholarship, as well as in the development of National and global linkages in education, and in the research and development of health.

Mission Statement

Within a values-driven student-centered ethos, the Faculty is committed to developing quality health professionals that are practice-oriented, receptive and responsive to the health care needs of the people of South Africa, and of Africa as a whole. This will be achieved by providing the highest standards of learning, teaching, research, and community engagement, underpinned by a commitment to creating space for students and staff to succeed.

Goals

The Faculty aims to:

1. Respond to the National health human resource and industry needs within the health sector.
2. Ensure the offering of entrepreneurial and leadership skills as a core component of all programmes within the Faculty of Health Sciences.
3. Continue to develop community-based projects to foster social responsibility through collaborative projects between programmes.
4. Enhance established quality management frameworks to support teaching and learning.
5. Develop applied research responsive to community and industry needs.
6. Develop mechanisms for the dissemination and application of research outcomes to inform teaching and learning, assessment, community engagement and further research.
7. Improve research participation and output through increased post-graduate student enrolment, publications and establishment of research groups.
8. Enable the generation of third-stream income through research and innovation (patents / artifacts) in order to supplement existing sources of income for the next five years.
9. Attract and retain diverse quality staff, while promoting advancement of individual potential.
10. Position DUT Health Sciences nationally

Values

The Faculty is guided by the following core values:

- Transparency, openness, honesty, and shared governance
- Professional and personal respect for others
- Educational relevance, equity and transformation (curriculum, access and success)
- Loyalty, accountability, dignity and trust

DEPARTMENTAL MISSION & GOALS

The Department of Basic Medical Sciences provides expertise in four disciplines, namely, Anatomy, Pathology, Physiology and Pharmacology. The department services almost all programmes within the Faculty of Health Sciences.

Vision

The Department strives to enhance teaching and learning by improving qualifications, academic development and research output of staff and to initiate innovative postgraduate offerings in collaboration with other departments within the faculty.

Mission

The Department is committed to providing quality and innovative teaching expertise in the disciplines of Anatomy, Physiology, Pharmacology and Pathology in the servicing of undergraduate and postgraduate programmes.

Goals of the Department

1. Support the core values of the Faculty of Health Sciences.
2. Support the missions of serviced departments.
3. To improve throughput by implementing strategies to support teaching and learning in keeping with the Servicing Policy for DUT.
4. To update and integrate teaching and learning methods in keeping with current trends.
5. To improve staff qualifications and enhance staff development.
6. To improve and contribute to research output within the Faculty of Health Sciences.
7. To streamline the academic activities and courses offered within the department.
8. To provide community service within DUT and the external community.

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1. DEPARTMENTAL AND FACULTY CONTACT DETAILS

All departmental enquiries to:

Secretary:	Mrs Ragani Bunsee
Tel No:	(031) 373 2406
Fax No:	(031) 373 2405/0866741111
Email:	raganib@dut.ac.za
Location of Department:	Department of Basic Medical Sciences, Gate 6, Steve Biko Road, Mansfield Site Area, Ritson Campus

All Faculty enquiries to:

Faculty Officer:	Mr Vikesh Singh
Tel No:	(031) 373 2701
Fax No:	(031) 373 2407
Email:	vikeshs@dut.ac.za
Location:	Health Sciences Faculty Office, Gate 8, Steve Biko Road, Mansfield Site Area, Ritson Campus

Executive Dean:	Professor T Puckree
Executive Dean's Secretary	Mrs Bilkish Khan
Tel No:	(031) 373 2704
Fax No:	(031) 373 2620
Email:	bilkishk@dut.ac.za
Location:	Executive Dean's Office, Gate 8, Steve Biko Road, Mansfield Site Area, Ritson Campus

2. STAFFING	Name and Qualification
Head of Department	Mrs RBE Kharwa, MMedSc (ClinPharm)(UDW); BPharm(UDW); NC : Fam. Plan(Potch)
Senior Lecturers	Dr F Haffejee, PhD (Optics & Imaging - Medicine) (UKZN); MSc (UKZN); BSc(Hons)(UDW); BSc(UN)
	Dr N Govender, PhD (Optics & Imaging - Medicine) (UKZN); MSc (UDW); BSc(Hons) (UDW); BSc(UDW)
	Dr N Mshunqane, PhD (Physiotherapy) (WITS); MSc(Physio)(WITS); BSc(Physio)(MEDUNSA)
	Dr JD Pillay, PhD (Physiology : Sports Science)(UCT); MPH(UKZN); BMedSc(Hons)(UDW); BMedSc(UDW)
	Mr MM Walters, MSc (Univ. Stellenbosch), BSc(Hons), BSc, HDE
Lecturers	Mrs F Ally, MEd (Higher Ed) (UKZN); BMedSc (Hons)(UDW); BMedSc(UDW); HDE(Post school)(UKZN)
	Mrs J Ducray, MMed (Sci) (UKZN); BMedSc (Hons)(WITS); BSc(WITS)
	Dr C Kell, MTech (Hom) (DUT)
	Ms M Coopasami, MPH (UKZN), BMedSc (Hons) (UKZN), BMedSc (UDW)
	Ms Y Thandar, MMedSc (ClinPharm) (UDW); BPharm(UDW)
Technicians	Mr A Mkhize, MTech (Biotechnology); BTech(Biotech)(ML Sultan); BSc(Univ. Zululand)
	Mrs B Mbhele, MMedSc (UKZN), BMedSc (Hons), BSc(BiolSc)
	Mrs Y Padayachee, BSc (RU)
Technical Assistant	Mr S Ninela
Secretary	Mrs R Bunsee
General Assistant	Mr S Govender

3. DEPARTMENTAL INFORMATION & RULES

3.1 Programmes serviced by the Department

Programmes serviced	Qualification code	SAQA NLRD number
ND: Biomedical Technology	NDBMT1	1895
ND: Clinical Technology	NDCLT1	1879
ND: Chiropractic	NDCHR	72171
ND: Consumer Science: Food and Nutrition	NDCSF2	66412
ND: Homoeopathy	NDHOM1	72186
NC: Dental Assisting	NCDNA1	72207
BHSc: Emergency Medical Care	BHEMC1	74471
ND: Environmental Health	NDEVH1	72231
BHSc: Medical Orthotics and Prosthetics	BHMOP1	91786
B Tech: Nursing Science	BTNS1	76925
BTech: Nursing: Primary Health Care	BTNPH1	16732
ND: Radiography: Diagnostic	NDRDD1	72258
ND: Radiography: Nuclear Medicine	NDRDN1	72259
ND: Radiography: Therapy	NDRDT1	72260
ND: Radiography: Ultrasound	NDRDU	79386
ND: Somatology	NDSOM1	3211007

3.2 Subjects offered by the department

Programme	Subjects	Code	Credits	Assessment	Pre-requisites	Co-requisites
Biomedical Technology	Anatomy & Physiology I	ANPH114	12	E	None	None
	Anatomy & Physiology I	ANPH124	12	E	None	None
Clinical Technology	Anatomy & Physiology II	ANPH202	24	E	Anatomy & Physiology I	None
	Anatomy I	ANAY101	16	E	None	None
	Pharmacology II	PHAR201	16	E	None	None
	Physiology I	PSIO102	24	E	None	None
Chiropractic	Anatomy I (Gross)	ANTY112	16	E	None	None
	Anatomy I (Histology)	ANTY122	12	E	None	None
	Anatomy II (Gross)	ANAT212	16	E	Anatomy I	None
	Anatomy II (Clinical)	ANAT222	16	E	Anatomy I	None
	Epidemiology II	EPHC201	16	E	None	None
	General Pathology II	GPAT201	8	E	Anatomy I Physiology I	None
	Physiology I	PHSY101	24	E	None	None
	Physiology II	PHSI201	24	E	Physiology I	None
	Systemic Pathology III (Mod 1)	SYPA311	24	E	General Pathology II Anatomy II Physiology II	None
	Systemic Pathology III (Mod 2)	SYPA321	16	E	General Pathology II Anatomy II Physiology II	None
Homoeopathy	Anatomy I: (Gross)	GRAN101	16	E	None	None
	Anatomy I (Histology)	HSTL101	12	E	None	None
	Anatomy II (Gross)	ANTY211	16	E	Anatomy I	None
	Anatomy II (Clinical)	ANTY221	16	E	Anatomy I	None
	Epidemiology II	EPHC201	16	E	None	None
	General Pathology II	GPAT201	8	E	Anatomy I Physiology I	None
	Physiology I	PHSY102	16	E	None	None
	Physiology II	PHSI201	24	E	Physiology I	None
	Systemic Pathology III (Mod 1)	SYPA311	24	E	General Pathology II Anatomy II Physiology II	None
	Systemic Pathology III (Mod 2)	SYPA321	16	E	General Pathology II Anatomy II Physiology II	None
Emergency Medical Care	Anatomy & Physiology I	ATPH102	24	CA	None	None

	General Pathology II	GPTH201	16	CA	Physiology II	None
	Pharmacology I	PHCL201	16	CA	Anat. & Physiol. I	None
	Physiology II	PHYL201	24	CA	Anat. & Physiol. I	None
Environmental Health	Anatomy & Physiology I	ANPY101	24	E	None	None
Food & Nutrition	Physiology Food I	PHFD101	24	E	None	None
Medical Orthotics & Prosthetics	Anatomy I	ANMY101	20	CA	None	None
	Anatomy II	ANMY201	12	CA	Anatomy I	None
	Clinical Studies I	CLCS101	16	CA	None	None
	Clinical Studies II	CLCS201	24	CA	None	None
	Physiology	PYSL101	12	CA	None	None
	Pharmacology	PHCY101	12	CA	None	None
Nursing Science	Anatomy & Physiology IA	ANPA101	12	E	None	None
	Anatomy & Physiology IB	ANPB101	12	E	None	None
	Anatomy & Physiology IIA	ANPA201	12	E	None	None
	Anatomy & Physiology IIB	ANPB201	12	E	None	None
	Introduction to Pharmacology	INPH101	4	E	None	None
	Pharmacology 201	PHMC201	8	E	None	None
Radiography	Anatomy I	ANAT101	18	CA	None	None
	Physiology	PHSI101	18	CA	None	None
Somatology	Applied Biological Science III	ABSC321	8	E	None	None
	Anatomy & Physiology I	APHY102	24	E	None	None
	Anatomy & Physiology II	ANBT201	16	E	Anat & Physio I	None

3.3 DEPARTMENTAL INFORMATION

3.3.1. Academic Integrity

Please refer to the General Rules pertaining to academic integrity G13 (1)(o). These will be enforced wherever necessary to safeguard the worthiness of our qualifications, and the integrity of the Faculty of Health Sciences at the DUT.

3.3.2. Code of Conduct for Students

In addition to the General Rules pertaining to Student Conduct SR3 (3), a professional code of conduct pertaining to behavior, appearance, personal hygiene and dress shall apply to all students registered within the Faculty of Health Sciences, at all times.

Students registered in the department will be required to adhere to the dress code as determined by the Head of Programme.

Students must adhere to all Health and Safety regulations both at DUT's Wentworth Hospital teaching facility, DUT Main campus and in clinical placements. Failure to do so will be treated as a breach of discipline.

3.3.3. Uniforms

Students must adhere to instructions regarding specific uniforms required during practicals. Refer to your Study Guide for more details.

3.3.4 Health and Safety

Students must adhere to all Health and Safety regulations both while at DUT and in Work Integrated Learning (WIL) placements. Failure to do so will be treated as a breach of discipline. Refer to your Study Guide for more details.

3.3.5 Attendance

Students are encouraged to achieve 100% attendance for all planned academic activities as these are designed to provide optimal support for the required competency. Where absence is unavoidable, the student must timeously advise the department of the reason. Only exceptional reasons will be condoned. Poor attendance records may lead to penalties.

A register of attendance will be circulated during each lecture and practical. It is the responsibility of all students to sign the register personally during these sessions.

Consult your subject Scheme of Work for the dates of the assessments. Absence from these assessments will not be condoned without a valid reason (and proof thereof). These test assessments form the bulk of the subject course mark which determines the student's eligibility for examination entry. Assignments and short tests may also be conducted as determined by the lecturers and marks from these assessments may contribute towards the course mark.

3.3.6 General Information for Anatomy Dissection Hall

3.3.6.1. Under no circumstances may unauthorized persons (persons not registered for Anatomy) enter.

3.3.6.2. Cadavers and all human materials must be treated with utmost respect.

3.3.6.3. All students must be appropriately dressed. White lab coats are compulsory.

3.3.6.4. Smoking and eating are strictly prohibited.

3.3.6.5. Each cadaver has 2 stainless steel tags attached (ear and small toe). Do not remove these tags.

3.3.6.6. Do not cut or tear plastic used to cover cadavers.

3.3.6.7. Buckets at the base of the table are for collecting body fluids only and not for waste paper, scalpel blades, etc. Specific bins are provided for the disposal of wastepaper, scalpel blades, etc.

3.3.6.8. Do not leave scalpel, forceps, etc. on the tables or in the cadaver.

3.3.6.9. Keep tables clean at all times.

3.3.6.10. Do not drop pieces of human material on the floor. Place all off-cuts into bowls provided.

3.3.6.11. A bowl is provided at each dissection table for human material only. Please refrain from placing paper towels, scalpel, blades, etc. into these receptacles.

3.3.6.12. Do not dispose of paper towels, scalpel blades, etc. into bins specifically provided for human material.

3.3.6.13. As far as possible do not discard skin. Use it to cover the cadaver. These are best to prevent dehydration.
3.3.6.14. After each session of dissection cover the cadavers appropriately.
3.3.6.15. Use the fluids provided in sprays to keep cadavers moist.

3.3.7 General Laboratory Information

3.3.7.1. No student is allowed in the laboratory unless a staff member is present.
3.3.7.2. Any student without a laboratory coat will NOT be admitted into the laboratory.
3.3.7.3. Closed shoes must be worn at all times - especially when dissecting equipment is in use.
3.3.7.4. No eating, drinking or smoking is allowed in the laboratory.
3.3.7.5. All cuts and sores must be covered.
3.3.7.6. Appropriate behaviour is expected at all times.
3.3.7.7. Each student will be allocated a bench space/work station for the year. It is the responsibility of the students to check their stations BEFORE the commencement of each practical session and to report any discrepancies immediately to a staff member. This pertains particularly to microscopes and slides.
3.3.7.8. Any breakages will be charged to the student responsible. The combined class will share the cost if the person responsible for the damage is not identified.
3.3.7.9. Students are not permitted into the preparation room or wash up room.
3.3.7.10. Students are responsible for keeping their workstations clean and tidy.
3.3.7.11. Microscopes must be handled and stored correctly after use. You will be advised on these procedures. Any mishandling of equipment could result in a student being denied access to the laboratory for the remainder of the year/course.
3.3.7.12. Practical sessions will begin promptly at the scheduled times. Students arriving late will not be admitted into the laboratory.
3.3.7.13. Report injuries to a staff member immediately.

4. DEPARTMENTAL RULES

These rules apply to all students registered for subjects offered by this Department.

4.1 Special Test and Condonement

No missed assessments will be condoned.

- If a student misses an assessment for reasons of illness, a special assessment may be granted if the student provides a valid medical certificate specifying the nature and duration of the illness, and a declaration that for health reasons it was impossible for the student to sit for the assessment. This certificate must be submitted to the subject lecturer no later than five (5) working days after the "fit for duty" date on the medical certificate.
- If a student misses an assessment for reasons other than illness, a

special assessment may be granted if the student provides a valid declaration that for unavoidable reasons it was impossible for the student to sit for the assessment. This certificate must be submitted to the subject lecturer no later than two (2) working days after that date of the missed assessment.

- Any student who misses an assessment and who does not qualify for a special assessment, and any student who qualifies for a special assessment but fails to write it, shall be awarded a zero mark for the missed assessment.

4.2 Student Appeals

Rule G1(8) refers to:

Any student wishing to appeal against:

(a) The implementation of an Institutional Rule must do so in the first instance to the relevant Head of Department;

(b) The decision of a Head of Department must do so via the relevant Executive Dean to the Faculty Board or a delegated Committee of the Faculty Board. The decision of the Faculty Board or a delegated Committee of the Faculty Board is final and no further appeals will be considered thereafter

(Amended w.e.f. 2009/01)

5. BOOKLIST - PRESCRIBED TEXTBOOKS FOR 2016

(The student must obtain the prescribed textbooks, and should consult the recommended textbooks)

Authors Name	Course	Title	Date of Publication	Library Copies
Gosling, Harris, Whitemore, Wiiliam	Homoeo/ Chiro (Anatomy I, II)	Human Anatomy Atlas & Text	Latest Edition	1
Crossman, A.R.; Neary, D	Homoeo/ Chiro- (2nd yr. only) (Anatomy II)	Neuroanatomy, An illustrated colour text Churchill Livingston	Latest Edition	1
Moore. K L	Homoeo/ Chiro (Anatomy I, II)	Clinically Oriented Anatomy Williams and Wilkens, Baltimore	Latest Edition	2
Wheater, et al.	Homoeo/ Chiro (Anatomy I) (Physio I, II)	Functional Histology: A text and colour Atlas Churchill	Latest edition	1
Penny Webb, Chris Bain & Sandi Pirozzo	Homoeo/ Chiro (Epi II)	Essential Epidemiology edition	Latest edition	4
C.J. Finlayson & B.A.T. Nevel	Homoeo/Chiro III	Pathology at a Glance	Latest edition	5
Dreyer AC, Dreyer MS, Nurses and Hattingh E & Thandar Y	Homoeo/ Chiro/ Clin Tech./EMC/ Postgrad & Nursing Science	Pharmacology for Other Health Workers	3rd Edition	3
Tortora, G.J. & Derrickson, B.	Food & Consumer Science/BioMed Tech Nursing Science	Introduction to Human Biology	Latest edition	2
Tortora, G.J., Derrickson, B	Homoeo/ Chiro I Radiography I	Essentials of Anatomy & Physio Wiley International Edition	2009 Latest edition	2
Bryan, H. Shier, Butler & Lewis	ClinTech I and II EMC I Anat. & Physio	Hole's Human Anatomy and Physiology	2004 Latest edition	1

Mader, S	Soma I & II Environ Health	Understanding Human Biology	9th Edition - 2006 or Latest edition	**2**
Keith L. Moore, Anne M.R. Agur	MOP Clin Tech Radiography (Anatomy I)	Essential Clinical Anatomy	Latest Edition	**2**
Widmaier, Raff & Strang	EMC II/ Homoeo/Chiro II MOP	Vander's Human Physiology The Mechanisms of Body Function	Latest Edition	**2**
Underwood J, Cross, S	Homoeo/Chiro Pathology	General and Systemic	Latest edition	

6. SUBJECT CONTENT

NB: Students are required to read this section in conjunction with the relevant study guide.

6.1 NATIONAL DIPLOMA: BIOMEDICAL TECHNOLOGY

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN	
Anatomy & Physiology IA ANPH114 (Module A)	Organization and functions of all systems of the human body Homeostatic mechanisms Structure and function of cellular organelles, including the causes and cellular basis of cancer Role of Body tissues, including epithelial, connective, muscle and nervous tissues Cardiovascular and respiratory systems	Theory Tests Practicals (1 Spotter + 1 Assignment) Examination Mark	20% 20% 60%
Anatomy & Physiology IB ANPH124 (Module B)	The Neuro-endocrine systems The digestive & urinary systems Reproductive physiology	Theory Tests Practicals (1Spotters+ 1 Assignment) Examination Mark	20% 20% 60%

6.2. NATIONAL DIPLOMA: CLINICAL TECHNOLOGY

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN	
Anatomy I ANAY101	Introduction to Anatomy Thorax; Abdomen and Pelvis Limbs and Back; Neuroanatomy Head and Neck	Theory Tests Spotters Assignment Attendance Examination Mark PAPER I :Theory (75% of Exam Mark) PAPER II Spotter: (25% of Exam Mark)	20% 12% 4% 4% 60%
Anatomy & Physiology II ANPH202	The Nervous System inclusive of the Central & Peripheral Nervous System and Sensory Physiology The Cardiovascular System including Blood Vessels Hemodynamics The Respiratory System including Physical Aspects and Mechanics of Ventilation and Acid-Base Balance The Urinary System inclusive of Urine Production and Renal Control of Electrolyte and Acid-Base Balance The Reproductive System inclusive of the endocrine regulation of both the male and females systems as well as fertilization, pregnancy and parturition	Theory Tests Practicals (Spotter + Assignment) Examination Mark	30% 10% 60%
Pharmacology II PHAR201	General Aspects of Drug Therapy Pharmacokinetics and Pharmacodynamics Administration of drugs to patients Adverse effects of drugs Drugs affecting the autonomic, somatic and sensory nervous system; central nervous system; haemopoietic system; respiratory system; digestive tract Analgesics and anti-inflammatory drugs; Antihistamines Hormones and hormone antagonists; Antimicrobial and other anti-infective drugs Cardiovascular drugs	Theory Tests Examination Mark	40% 60%

Physiology PSIO102	Introduction; Nervous System; Cardiovascular System Respiratory System Renal System Blood Lymphatic & Immunity Reproductive System Gastro-intestinal system	Theory Tests 20% Practicals 20% Examination Mark 60%

6.3. NATIONAL DIPLOMA: CHIROPRACTIC

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Anatomy I : Gross ANTY112	Introduction to Anatomy Thorax Abdomen Pelvis	Theory Tests 30% Practicals (2 Spotters) 10% Examination Mark 60%
Anatomy I : Histology ANTY122	Introduction to Histology Primary Tissues: including epithelia, connective tissues (Binding tissues, blood, cartilage and bone), muscle and nervous tissue Histology of the Body Systems including cardiovascular, integumentary, lymphatic organs, respiratory, digestive, urinary, endocrine & reproductive	Theory Tests 30% Practicals 10% Examination Mark 60%
Anatomy II : Gross ANAT212	Back Upper Limb Lower Limb	Theory Test 20% Spotter 15% Project/Assignment 5% Examination 60% PAPER I: Theory : Back, Upper Limb and Lower Limb 50% PAPER II: Spotter : Back, Upper Limb and Lower Limb 50%
Anatomy II : Clinical ANAT222	Neuroanatomy Head & Neck Applied Anatomy	Theory Test 20% Spotter 10% Project/Assignment 5% Class Assessments 5% Examination 60% PAPER I : Theory : Applied Anatomy, Head & Neck and neuroanatomy 50% PAPER II Spotter : Applied Anatomy, Head & Neck and neuroanatomy 50%
Epidemiology II EPHC201	Principles of Epidemiology Parasitology Immunology	Theory Tests 30% Practicals 10% Examination Mark 60%
General Pathology II GPAT201	Introduction to Pathology and Disease Cell injury, death and necrosis Amyloid Calcification Pigmentation Jaundice Oedema, fluid and electrolyte imbalance; Hyperaemia, congestion, haemorrhage, thrombosis, embolism, infarction Inflammation, healing and repair; Infection and disease Disorders of Growth and cancers; Effects of Radiation Disorders of Carbohydrate metabolism; Nutritional disorders Autoimmune disorders	Theory Tests 30% Practicals 10% Examination Mark 60%
Physiology I PHSY101	The Human Body The Chemical level of organisation: Basic Chemistry The Cellular level of organisation	Theory Tests 26% Practicals 14% Examination Mark 60%

	The Integumentary System: Skin and membranes The Muscular System The Nervous System Special Senses The Endocrine System The Cardiovascular System The Lymphatic System and Body Defences The Respiratory System The Digestive System The Urinary System The Reproductive System		
Physiology II PHSI201	Membrane and muscle physiology Cardiovascular physiology Respiratory physiology The nervous system The digestive system The urinary system; Endocrine physiology Reproductive physiology	Theory Tests Practicals Examination Mark	30% 10% 60%
Systematic Pathology II Module I SYPA311	Skin Blood Vessels Cardiovascular System Haematopoietic and Lymphoid Systems; Respiratory System Renal System Gastrointestinal Tract & Liver, Pancreas & Biliary Tract Musculoskeletal System The Nervous System; Endocrine System Male Genital Tract Female Genital Tract and Breast	Theory Tests Assignments Attendance Examination Mark	30% 7% 3% 60%
Systemic Pathology II - Pharmacology Module II SYPA321	General Aspects of Drug Therapy; Pharmacokinetics and Pharmacodynamics Administration of drugs to patients Adverse effects of drugs Drugs affecting the autonomic, somatic and sensory nervous system Central nervous system Haemopoietic system Respiratory system Digestive tract Analgesics and anti-inflammatory drugs Antihistamines Hormones and hormone antagonists Antimicrobial and other anti-infective drugs Cardiovascular drugs Poisoning and drug treatment in emergencies	Theory Tests Examination Mark	40% 60%

6.4. NATIONAL DIPLOMA: HOMOEOPATHY

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Anatomy I : Gross GRAN101	Introduction to Anatomy Thorax Abdomen Pelvis	Theory Tests 30% Practicals (2 Spotters) 10% Examination Mark 60%
Anatomy I : Histology ATMY122	Introduction to Histology Primary Tissues: including epithelia, connective tissues (Binding tissues, blood, cartilage and bone), muscle and nervous tissue Histology of the Body Systems including cardiovascular, integumentary, lymphatic organs, respiratory, digestive, urinary, endocrine & reproductive	Theory Tests 30% Practicals 10% Examination Mark 60%
Anatomy II : Gross ANTY211	Back Upper Limb Lower Limb	Theory Test 20% Spotter 15% Project/Assignment 5% Examination 60% PAPER I: Theory : Back, Upper Limb and Lower Limb 50% PAPER II: Spotter : Back, Upper Limb and Lower Limb 50%
Anatomy II : Clinical ANTY221	Neuroanatomy Head & Neck Applied Anatomy	Theory Test 20% Spotter 10% Project/Assignment 5% Class Assessments 5% Examination 60% PAPER I : Theory : Applied Anatomy, Head & Neck and neuroanatomy 50% PAPER II Spotter : Applied Anatomy, Head & Neck and neuroanatomy 50%
Epidemiology II EPHC201	Principles of Epidemiology Parasitology Immunology	Theory Tests 30% Practicals 10% Examination Mark 60%
General Pathology II GPAT201	Introduction to Pathology and Disease Cell injury, death and necrosis Amyloid Calcification Pigmentation Jaundice Oedema, fluid and electrolyte imbalance; Hyperaemia, congestion, haemorrhage, thrombosis, embolism, infarction Inflammation, healing and repair; Infection and disease Disorders of Growth and cancers; Effects of Radiation Disorders of Carbohydrate metabolism; Nutritional disorders Autoimmune disorders	Theory Tests 30% Practicals 10% Examination Mark 60%
Physiology I PHSY101	The Human Body The Chemical level of organisation: Basic Chemistry The Cellular level of organisation The Integumentary System: Skin and membranes The Muscular System The Nervous System Special Senses The Endocrine System The Cardiovascular System The Lymphatic System and Body Defences The Respiratory System	Theory Tests 26% Practicals 14% Examination Mark 60%

	The Digestive System The Urinary System The Reproductive System	
Physiology II PHSI201	Membrane and muscle physiology Cardiovascular physiology Respiratory physiology The nervous system The digestive system The urinary system; Endocrine physiology Reproductive physiology	Theory Tests 30% Practicals 10% Examination Mark 60%
Systematic Pathology II Module I SYPA311	Skin Blood Vessels Cardiovascular System Haematopoietic and Lymphoid Systems; Respiratory System Renal System Gastrointestinal Tract & Liver, Pancreas & Biliary Tract Musculoskeletal System The Nervous System; Endocrine System Male Genital Tract Female Genital Tract and Breast	Theory Tests 30% Assignments 7% Attendance 3% Examination Mark 60%
Systemic Pathology II - Pharmacology Module II SYPA321	General Aspects of Drug Therapy; Pharmacokinetics and Pharmacodynamics Administration of drugs to patients Adverse effects of drugs Drugs affecting the autonomic, somatic and sensory nervous system Central nervous system Haemopoietic system Respiratory system Digestive tract Analgesics and anti-inflammatory drugs Antihistamines Hormones and hormone antagonists Antimicrobial and other anti-infective drugs Cardiovascular drugs Poisoning and drug treatment in emergencies	Theory Tests 40% Examination Mark 60%

6.5. NATIONAL CERTIFICATE: DENTAL ASSISTING

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Oral Anatomy & Pathology OAPT101	Introduction to Microbiology Micro-organisms Bacteria Viruses Fungi Protozoa AIDS and Hepatitis Introduction to Pharmacology Terminology Pharmacokinetics Pharmacodynamics Analgesics Antimicrobials Sedative / hypnotics Miscellaneous Classes Drug Interactions Prescription Writing	Theory Tests 20% Examination Mark 30% The final examination will comprise one three hour shared paper (Pharmacology and Oral Anatomy).

6.6. BACHELOR OF HEALTH SCIENCES: EMERGENCY MEDICAL CARE

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN	
Anatomy & Physiology I ATPH101	Introduction Cells Tissues Reproductive System Respiratory System Cardiovascular System Nervous System Ear and Eye Integumentary System Skeletal System Muscular System Digestive System Urinary System Endocrine System	Theory Tests Practicals	80% 20%
General Pathology GPTH201	Introduction to Pathology and Disease Cell injury, death and necrosis Amyloid Calcification Pigmentation Jaundice Oedema, fluid and electrolyte imbalance; Hyperaemia, congestion, haemorrhage, thrombosis, embolism, infarction Inflammation, healing and repair; Infection and disease Disorders of Growth and cancers; Effects of Radiation Disorders of Carbohydrate metabolism; Nutritional disorders Autoimmune disorders	Theory Test 1 Theory Test 2 Theory Test 3	33% 33% 33%
Pharmacology I PHAR101	General Aspects of Drug Therapy Pharmacokinetics and Pharmacodynamics Administration of drugs to patients Adverse effects of drugs Drugs affecting the autonomic, somatic and sensory nervous system Central nervous system Haemopoietic system Respiratory system Digestive tract Analgesics and anti-inflammatory drugs Antihistamines Hormones and hormone antagonists Antimicrobial and other anti-infective drugs Cardiovascular drugs Poisoning and drug treatment in emergencies	Theory Tests	100%
Physiology II PHYL201	Nervous system Muscular system Cardiovascular system Respiratory system Renal system Blood Immunity Pregnancy	Theory Test 1 Theory Test 2 Theory Test 3	33% 33% 33%

6.7. NATIONAL DIPLOMA: ENVIROMENTAL HEALTH

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Anatomy & Physiology ANPY101	Organisation of the body Homeostatic mechanisms Structure and function of cellular organelles, including the causes and cellular basis of cancer Role of Body tissues, including epithelial, connective, muscle and nervous tissues The skin Skeletal and muscular systems Nervous system Function of blood, Cardiovascular and respiratory systems The nervous system The digestive system The urinary system Endocrine system; Reproductive system	Theory Tests 30% Practicals 10% Examination Mark 60%

6.8. ND: FOOD MARKETING & MANAGEMENT

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Physiology : Food I PHFD101	Introduction; Nervous System Cardiovascular System Respiratory System Renal System Blood Lymphatic & Immunity Reproductive System Gastro-intestinal system	Theory Tests 40% Examination Mark 60%

6.9. BACHELOR OF HEALTH SCIENCES: MEDICAL ORTHOTICS & PROSTHETICS

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Anatomy I ANMY101	Introduction to Anatomy Introduction to Systems: Integumentary, Skeletal, Muscular (muscle tissue, architecture of muscle), Articular, Cardiovascular and Nervous Back, Upper limbs and Lower limbs.	Theory: 20hrs Practical: 60hrs Self-Study: 120hrs There is no final examination for this module. See Study Guide for details.
Anatomy II ANMY201	**Section A: Neck** - surface anatomy, superficial neck muscles, triangles of the neck, deep structures of the neck, root of the neck, cervical viscera, thyroid gland, parathyroid glands, facial planes, pharynx, larynx. **Section B: Head** —Osteology, the Face - muscles, neurovascular structures, lymphatic drainage, the Scalp, cranial fossae and foramina (self-study), the Orbit, parotid and Temporal regions, temporomandibular joint, oral region (self-study), salivary glands, nose and paranasal sinuses, ear (self-study). **Section C: Neuroanatomy** - Embryology, cerebral topography, brainstem and spinal cord, cerebellum, thalamus, epithalamus and hypothalamus, reticular formation, visual, olfactory and limbic systems, cranial nerves, blood supply of the brain.	**120 contact hours/200 notional hours** Theory: 20hrs Practical: 60hrs Self-Study: 120hrs There is no final examination for this module. See Study Guide for details.
Clinical Studies CLCS101	Inflammation, repair and healing. Inflammatory diseases. Degenerative diseases. Post traumatic conditions. Metabolic disorders. Circulatory disorders Amputations	**64 contact hours/160 notional hours** There is no final examination for this module. See Study Guide for details.

	Post-traumatic osteoporosis Aseptic bone necrosis. Paralysis resulting from nerve lesions. Diseases of the pelvis and hip. Diseases of the knee. Diseases of the foot. Diseases of the shoulder, elbow and hand, limb deformities, skin disorders and wound repair	
Clinical Studies CLCS201	Nervous system disorders and diseases (child and adult)(CNS and PNS) including Polio, Cerebral palsy, paraplegia and quadriplegia, ataxia. Parkinson's disease. Spinal and thoracic deformities, scoliosis, kyphosis. Diseases of the spine. Circulatory disorders. Metabolic disorders. Tumors. Degenerative diseases. Burns. Fractures.`	**96 contact hours/240 notional hours** There is no final examination for this module. See Study Guide for details.
Physiology PSYL101	Anatomy and physiology are defined, the relationships between anatomy and physiology re explained, cells and tissues, integumentary system, muscular system, skeletal system, nervous system, special senses, endocrine system, cardiovascular system, immunity and the lymphatic system respiratory system, digestive system, urinary system, reproductive system.	**96 contact hours/160 notional hours** Lectures: 16hrs Practical: 32hrs Tutorials: 16hrs Case studies: 16hrs Independent study 80hrs There is no final examination for this module. See Study Guide for details.
Pharmacology PHCY101	Basic pharmacology Pharmacodynamics' Pharmacokinetics Central nervous system Non-steroidal anti-inflammatory drugs Vaccines Cardiovascular system Haemopoietic system Respiratory system Gastro-intestinal tract Endocrinology Vitamins and mineral Anti-neoplastic drugs and immune suppressors Wound care Dermatology Poisoning and emergencies HIV/AIDS Anti-histamines.	**72 contact hours/120 notional hours** Lectures: 42hrs Tutorials: 12hrs Assignments 12hrs Independent study 48hrs Assessment 6hrs There is no final examination for this module. See Study Guide for details.

6.10. B Tech: NURSING SCIENCE

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN
Anatomy & Physiology IA ANPA101	Introduction The Cell Tissues (Epithelial, Connective, Muscular and Nervous) Skeletal System Joints	Theory Tests 20% Practicals 20% Examination Mark 60%
Anatomy & Physiology IB ANPB101	Muscular System; Blood Cardiovascular System Lymphatic System	Theory Tests 20% Practicals 20% Examination Mark 60%
Anatomy & Physiology IIA ANPA201	Central Nervous System; Special Senses Endocrine System Respiratory System	Theory Tests 20% Practicals 20% Examination Mark 60%
Anatomy & Physiology	Female Reproductive System	Theory Tests 20%

IIB ANPB201	Male Reproductive System Urinary System Digestive System Assessment Plan	Practicals Examination Mark	20% 60%
Introduction to Pharmacology INPH101	General aspects of drug therapy including scheduling and legislation Pharmacokinetics and Pharmacodynamics Adverse drug reactions including drug interactions Administration of drugs to patients Autonomic Nervous System (Pharm)	Theory Tests Examination Mark	40% 60%
Pharmacology PHMC201	Infective diseases, antimicrobial and antiparasitic drugs Central nervous system drugs Drugs that affect the respiratory system Drugs that affect the cardiovascular system Analgesics and anti-inflammatory drugs Drugs that affect the digestive tract Drugs that affect the endocrine system Family planning and immunization Pharmacodynamics with ref to toxicity, adverse drug reactions and interactions, drugs in pregnancy, lactation, children and elderly; Adverse drug events and reporting mechanisms	Theory Tests Examination Mark	40% 60%

6.11. POSTGRADUATE NURSING

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN	
Primary Health Care IV PRHC401	General Aspects of Drug Therapy Pharmacokinetics and Pharmacodynamics Administration of drugs to patients Adverse effects of drugs Drugs affecting the autonomic, somatic and sensory nervous system Central nervous system Haemopoietic system Respiratory system Digestive tract Analgesics and anti-inflammatory drugs; Antihistamines Hormones and hormone antagonists Antimicrobial and other anti-infective drugs Cardiovascular drugs Poisoning and drug treatment in emergencies Cough /Emphysema Ulcers / Constipation / Diarrhea Poisoning and Emergency drug treatment	Theory Tests (3x) Assignment (1x)	75% 25%

6.12. NATIONAL DIPLOMA: RADIOGRAPHY

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN	
Anatomy I ANAT101	Introduction to Anatomy Musculoskeletal Anatomy Regional Anatomy	Module 1 Module 2 Module 3	10% 60% 30%
Physiology I PHSI101	Introduction Nervous System Cardiovascular System Respiratory System Renal System Blood Lymphatic & Immunity Reproductive System Gastro-intestinal system	Evaluation Tests	100%

6.13. NATIONAL DIPLOMA: SOMATOLOGY

SUBJECT (CODE)	LEARNING AREAS/CONTENT	ASSESSMENT PLAN	
Applied Biological Sciences III Module 2 ABSC321	Introduction to Pharmacology Care and Control of Medicines; Pharmacokinetics Pharmacodynamics Anti-Obesity Drugs Anti-microbial Drugs Male and Female Hormones; Oral Contraceptives Topical Dermatologicals and Acne Drugs affecting the GIT, CNS and CVS Non-steroidal anti-inflammatory drugs	Theory Tests Examination Mark	40% 60%
Anatomy & Physiology I APHY102	Introduction to living organisms, Cell - cell metabolism, Tissues, Integumentary, Muscular, Skeletal Systems, Digestive System, Cardiovascular System, Blood, Lymphatic System, Respiratory Systems.	Theory Tests Practicals Examination Mark	30% 10% 60%
Anatomy & Physiology II ANBT201	Neuro and senses Endocrine and reproductive Body defences and lymphatics Urinary	Theory Tests Practicals Examination Mark	30% 10% 60%