MEDICAL ORTHOTICS & PROSTHETICS

DUT
DURBAN UNIVERSITY OF TECHNOLOGY
INYUVESI YASETHEKWINI YEZOBUCHWEPHESHE

FACULTY OF HEALTH SCIENCES

2024 HANDBOOK

ENVISION2030

transparency • honesty • integrity • respect • accountability
fairness • professionalism • commitment • compassion • excellence

CREATIVE. DISTINCTIVE. IMPACTFUL.

HANDBOOK FOR 2024

FACULTY of

HEALTH

SCIENCES

DEPARTMENT of
MEDICAL ORTHOTICS
and PROSTHETICS

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 module 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, & VALUES

Vision

"Leading Transformative and Innovative Health Sciences Education'

Mission Statement

"Developing Holistic Professionals responsive to Healthcare needs

Through excellence in:

- Teaching and Learning
- Research, Innovation and Engagement
- Fostering Entrepreneurship

Values

Professionalism

(To work within regulatory frameworks of professional conduct. To maintain and develop professional expertise and good work ethic).

Integrity

(To conduct ourselves with strong moral principles. To be honest and authentic. To do what is ethical and just).

Ubuntu

(To treat people with respect, fairness, courtesy, politeness and kindness).

Transparency

(To conduct ourselves with openness and honesty through shared governance).

Accountability

(To accept responsibility for ones actions).

DEPARTMENTAL MISSION VALUES & GOALS

Vision:

Pioneering **Scholarship and Innovation** in Orthotics and Prosthetics

Mission:

"Developing Practitioners responsive to Global Orthotic and Prosthetic needs"

through:

1. Teaching and Learning
2. Research and Engagement
3. Entrepreneurship
4. Technology and Advancement

VALUES

- Integrity

(Non- maleficence: Do no harm. Honesty. Fairness. Transparency)

- Professionalism

(Maintaining ethical standards, principles and guidelines. Independent, proactive and self-sufficient)

- Compassion

(To understand, have empathy and consider another's situation)

- Creativity

(Logic. Out-the-box thinking. Think on your feet. Question. Be authentic. Uniqueness. Stand out)

Departmental Goals:

- To strategically position the department in the Higher Education sector.
- To advance education and research in orthotics and prosthetics.
- To enrich teaching and learning in orthotics and prosthetics through mechanisms designed for continuous improvement.
- To continually advance scholarship and expertise of all stakeholders.
- To partner with, and engage in, community advancement initiatives.
- To adopt an ethos of excellence in Higher Education.

CONTENTS
PAGE

1. DEPARTMENTAL & FACULTY CONTACT DETAILS

All departmental enquiries to:

Secretary	: Ms Nosipho Thabethe
Tel No	: (031) 373 6723
Email	: nosiphot@dut.ac.za/oandp@dut.ac.za
Location of Department	: Wentworth Hospital, No 1 Boston Road, Wentworth

All Faculty enquiries to:

Faculty officer	**:** Ms Fortunate Thembelihle Mayisela
Tel No	**:** (031) 373 2701
Email	**:** thembim@dut.ac.za
Location	**:** Health Faculty Office, Gate 8, Steve Biko Road, Mansfield Site Area, Ritson Campus

Executive Dean	: Prof Gugu Mchunu
Executive Dean's Secretary	: Mrs Bilkish Khan
Tel No	: (031) 373 2704
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:	Mr B Nothling: NHD: Med Orth & Prosth (TUT)
(Acting)	
Lecturers/ Clinical Instructors:	Mrs Corli von Solms: B Tech MOP (TUT)
	Ms C Jacob: BHSc: Med Orth & Prosth (DUT)
Secretary:	Ms NNP Thabethe: Master of Management Sciences specializing in Marketing; B.Tech: Bus Admin (DUT)

3. DEPARTMENTAL INFORMATION & RULES

3.1 PROGRAMMES OFFERED BY THE DEPARTMENT

The department offers only one programme namely:
Medical Orthotics and Prosthetics

3.2 QUALIFICATIONS OFFERED BY THE DEPARTMENT

Only one qualification is offered in this department. Upon successful completion, the learning programme will lead to the award of the following qualification.

Qualification	Qual Code	SAQA NLRD Number	Important dates
BHSc. (Medical Orthotics and Prosthetics)	BHMOP3	91786	First offered in July 2013

3.3 DEPARTMENTAL INFORMATION

The graduates from this profession will be able to apply required skills and expertise for both Orthotics and prosthetics. Orthotics is the branch of medicine that provides splints, braces or special footwear to their patients, while prosthetics is the branch of medicine that designs and creates artificial body parts that match the missing limb as closely as possible. Offering of the current Bachelor of Health Sciences in Medical Orthotics and Prosthetics (BHSc: MOP) began in 2013. The department is a component of the Faculty of Health Sciences at the Durban University of Technology and is based at Wentworth Hospital on the Southern part of the eThekwini District of the KwaZulu-Natal province.

The following information must be read in conjunction with the programme rules.

3.3.1 Academic Integrity

Attention is drawn 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/Confidentiality

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

Due to the nature of this course and the clinical environment that is encountered on a daily basis, strict patient confidentiality and respect needs to be adhered to at all times. Please consider the patient as well as the family of the patient.

Use common sense and empathy in your approach, so that an understanding of trust and care is fostered and nurtured between you and your patient (See Rule 4.3.8).

3.3.3 Uniforms

Students must adhere to instructions regarding specific uniforms required during practical's and clinic sessions. Because of public interaction in the clinical environment, it is important to maintain a high standard of dress code and behaviour (See Rule 4.3.8).

3.3.4 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 accepted for absence from guest lectures, industry or field trips. Poor attendance records may lead to penalties. Where absence impacts on assessment, rule 4.3.3.2 below will be applied.

3.3.5 Health and Safety

Students must adhere to all Health and Safety regulations both at DUT and in Work Integrated Learning (WIL) placements. Failure to do so will be treated as a breach of discipline. Extreme care and caution need to be observed, as working in the laboratories could present itself with potentially hazardous situations where injury can occur. Please respect these rules, for your own safety and protection, as well as for those around you.

The Department of MOP's additional requirements for laboratory or clinics includes the use of safety equipment required for laboratory or clinical work, as well as infection control (latex gloves, safety glasses, safety footwear and ear plugs), when required. Use of the laboratories will be dependent on students following the rules, regulations, policies and procedures of the facility that will be on display within the labs.

3.3.6 Work Integrated Learning

Work integrated learning (WIL) is mandatory for all students in their 4th year of study, namely Clinical practice 4 A and 4B. 1000 clinical/practical hours must be fulfilled in year 4, of which 20% may be covered in year 3. The onus is on the student to find placement, albeit that the department will liaise with private and government institutions to help facilitate WIL as far as possible. It should be noted that placement for WIL must be at a DUT or the Health Professions Council of South Africa (HPCSA) accredited facility of the students choice. Should a student identify a facility that is not DUT accredited, the student may request that the department of MOP visit that facility for the process of accreditation. If the facility identified meets the necessary requirements then the DUT shall accredit that facility for the WIL aspect of the programme. Department of Health Orthotic and Prosthetic facilities and hospitals may be approached not only in KZN but in all provinces. Should the need arise, then alternative suitable sites of WIL may be sourced within South Africa. Additional placement for Advanced Clinical Practice will be the choice of the student at any national or international centre. The DUT MOP clinic is to be utilised as a last resort and is not encouraged.

3.3.7 Serviced Modules

Students need to familiarise themselves with the guides and specific rules that may apply to serviced modules, and with the departments running these modules.

3.3.8 Registration with the Professional Board

3.3.8.1 Registration as a Student

Within two weeks of registration with the Department of MOP students are required to register as Student Orthotists and Prosthetists with the HPCSA, as determined in the regulations set out in the Health Professions Act, Act No. 56 of 1974, as amended by Act No. 29 of 2007, and on the recommendation of the HPCSA by submission of Form 53 as well as the relevant fee.

3.3.8.2 Registration as a Graduate

On successful completion of the qualification, and the completion of the required hours of Clinical Practice, accumulated in the 3rd and fourth year of study, a graduate who has satisfied the requirements of the Professional Board for Occupational Therapy, Medical Orthotics and Prosthetics and Arts Therapy, may register as a qualified Medical Orthotist and Prosthetist with the HPCSA. The HPCSA has the authority to institute a further six months supervised practice, should the student not have met the desired HPCSA

requirements for independent practice registration. Further registration with the Board of Healthcare Funders of SA [BHF] is permitted after the graduate has received his/her HPCSA registration as an independent practitioner.

3.3.9 Code of Conduct for Students

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

- Students registered in the programme will be required to adhere to the dress code as determined by the Head of the Programme, with regard to specific uniforms required during practical's and clinic sessions. The uniform required is a white clinic coat or scrub recommended by DUT, to be worn separately or over normal attire. Formal trousers or denim jeans, black or charcoal in colour, and the use of safety boots and aprons, are required in the laboratory.
- Students are not allowed to access the general Wentworth Hospital facilities, unless for bona fide medical reasons. In those cases where access is required, supervised access may be granted.
- Students must adhere to all Health and Safety regulations, both at DUT's Wentworth Hospital teaching facility, at the DUT main campus, and in clinical placements. Failure to do so will be treated as a breach of discipline. Students are required to follow the correct channels of communication at all times. This begins with the students lecturer, thereafter the line of communication will only be entertained by the HOD should the lecturer not have resolved or attended to the request.
- Students are to advise any faults discovered on machinery immediately to the lecturer delivering clinical practice. Injuries from faulty or broken equipment can seriously injure a student or lecturer and can be avoided by reporting the fault immediately.
- It remains the students responsibility to keep work stations clean at all times. Work in the plaster room will be contingent on the plaster room having been cleaned properly each day. Cleaning staff are not responsible to clean after students, but merely keep the facility and ablutions respectable.
- Immunisation against Hepatitis A&B is compulsory. Immunisation will be facilitated through the MOP programme.
- Students must be in possession of a valid first-aid certificate in order for the qualification to be issued. This will be facilitated through the MOP programme. Students missing the specified course will be required to earn their own certificate at their own cost.

4. BACHELOR OF HEALTH SCIENCES IN MEDICAL ORTHOTICS & PROSTHETICS (BHMOP3)

4.1 PROGRAMME INFORMATION

The Bachelor of Health Sciences in Medical Orthotics and Prosthetics is registered by the SAQA at NQF level 8 of the HEQSF. The programme is a professional degree with a minimum of 480 SAQA credits and allows vertical articulation into appropriate masters degree.

The qualifying graduate will be able to competently apply and integrate theoretical principles, evidence-based techniques, practical experience, clinical procedures, and appropriate skills. The programme of study will produce a well-rounded graduate who will be capable of practicing as a clinician, developing and managing a clinic or a laboratory, or providing services as a private practitioner. The graduating student will be a team player capable of working in multidisciplinary teams, with the ability to constructively advance the profession.

4.1.1 Purpose

The purpose of this qualification is to develop a graduate competent in the knowledge, attitudes, insight and skills required for the orthotic and prosthetic professions.

4.1.2 Programme Structure

Code	Module/Module	HEQSF Level	Assessment type (CA/E)	SAQA	Pre-Requisite Modules	Co-requisite Modules
Year 1						
PSIC101	Physics	5	CA	12		
CSTN101	Cornerstone	5	CA	12		
MTMS101	Mathematics	5	CA	8		
MTSC101	Materials Science	5	CA	12		
BIMC101	Biomechanics 1	6	CA	16		
ANMY101	Anatomy 1	6	CA	20		
POPR101	Principles of Orthotics and	5	Ca	28		

	Prosthetics I					
CLCP101	Clinical Practice I	5	CA	24		
Year 2						
CGRC101	Computer and graphical communication	6	CA	12		
ETRN101	Electronics	6	CA	8	BIMC101&PSIC101	
ANMY201	Anatomy II	6	CA	12	ANMY101	
CHRI101	Community Health Care and Research-Intro	6	CA	12		
PYSL102	Physiology for MOP	6	CA	16		
BIMC201	Biomechanics 2	7	CA	12	BIMC101&PSIC101	
POPR201	Principles of Orthotics and Prosthetics II	6	CA	28	POPR101,BIMC101, CLCP101	
CLCP201	Clinical Practice II	6	CA	28	CLCP101, BIMC101 &POPR101	
EMDL101	Ethics and Medical Law	7	CA	8		
Year 3						
CHRN101	Community Healthcare and Research-Intermediate	7	CA	12	CHRI101	
CLCS101	Clinical Studies I	6	CA	16	PYSL101,ANMY101 &201	
PYCL101	Psychology	7	CA	12		
BPHY101	Basic Pharmacology	6	CA	12	PYSL101,ANMY101 &201	
BIMC301	Biomechanics III	8	CA	12	BIMC101&201,POPR101&201	
POPR301	Principles of Orthotics and Prosthetics III	7	CA	32	POPR101&201,BIMC201,CLCP201	
CLCP301	Clinical Practice III	7	CA	24	POPR201,BIMC201,CLCP201	
Year 4						

CLCS201	Clinical Studies II	7	CA	24	CLCS101	
CLPO401	Clinical Practice IVA (Orthotics)	8	CA	32	CLCP301,POPR301	
CLPP401	Clinical Practice IVB (Prosthetics)	8	CA	32	CLCP301,POPR301	
CLBM101	Clinic, Laboratory and Business Management	8	CA	16		
CHRA101	Community Healthcare and research-Advanced	8	CA	12	CHRI101,CHRN101	
ACLP401	Advanced clinical practice	8	CA	8	CLCP301,POPR301	

4.2 PROGRAMME RULES

In addition to the rules in the General Handbook, the following programme rules apply:

4.2.1 Minimum Admission Requirements

In addition to Rule G7, the following requirements must be met:
National Senior Certificate (NSC) with endorsement for degree entry, with the following subjects:

DEPARTMENTAL NSC REQUIREMENTS		**DEPARTMENTAL SENIOR CERTIFICATE REQUIREMENTS**		
National Senior Certificate (NSC) with endorsement for degree entry with the following subject.		A Senior Certificate with matriculation exemption with the following subjects at the appropriate ratings.		
Compulsory Subjects	**NSC Rating Code**	**Compulsory Subjects**	**HG**	**SG**
English (home)	3	English	E	C
Life Sciences	4	Biology	D	B
Physical Sciences	4	Physical Sciences	D	B
Mathematics	4	Mathematics	D	B
As well as two additional 20 credit subjects only one of which may be an additional language with a NSC rating of 4				

(Approved: Senate 29/08/2012)

4.2.1.1 Admission requirements based upon Work Experience, Age and Maturity, and RPL

The DUT general rules G7 (3) and G7 (8), respectively apply.

4.2.1.2 Admission of International students

The DUT's Admissions Policy for International Students, and General Rules G4 and G7 (5) apply. *(Approved: Senate 29/08/2012)*

4.2.2 Selection Criteria

In accordance with Rule G5, acceptance into the programme is limited to 30 places. As more qualifying applications are received than can be accommodated, the following selection process determines placement in the programme:

- All applicants must apply through the Central Applications Office (CAO).
- Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 11, or Grade 12 trial marks, will be used for current matriculants). i) Applicants must have:

a) Normal eye sight. Spectacles/contact lenses that provide 20/20 vision are considered acceptable.

b) Completed at least **8 hours** of voluntary service in a Prosthetic and Orthotic environment, for which a report from the visited institution /site must be submitted prior to being invited to the interview process. This is not a standard form just a letter of your attendance. Applicants who meet the above criteria:

c) Will be invited to a manual dexterity test and an interview.

d) Applicants will be ranked on points earned according to the table below:

Assessment	**Weighting**
Results of the Senior Certificate or National Senior Certificate	35%
Dexterity Score	40%
Interview Score	25%

e) The 30 top-ranked applicants will be selected for access into the programme. *(Approved: Senate 29/08/2012)*

4.2.3 Assessment and Moderation

Students are encouraged to work steadily through the period of registration in order to achieve the highest results possible.

- Due to COVID-19 related restricts some assessment might have to be undertaken virtually. In addition some summative assessments might also have to be changed to continuous assessment methods. Clarity on the nature of assessments will be communicated to students upon receipt of relevant decisions from university management.

- Assessment details are listed under each module at the back of this handbook.
- Moderation follows the DUT requirements.
- Assessment includes both formative and summative assessment.
- A variety of assessment methods are used which include, but are not limited to, written tests, oral tests, OSCE testing, practical and clinical examinations, group work and assignments.
- Where applicable, the year mark component for those modules where a final examination is written is 40% of the final result.
- Where applicable, the final examination may comprise of theory or practical elements, or both theory and practical elements, and will constitute 60% of the final mark.
- Further to DUT rules G14 and G15, the final mark for examined modules is determined as follows: Final mark (100%) = 40% year mark + 60% final examination mark.
- For modules that do not have a final examination, the results are determined through a weighted combination of assessments, as described in the study guides. There are no supplementary examinations for these modules. The course mark then constitutes 100% of the final mark.

(Approved: Senate 29/08/2012)

4.2.4 Special Tests 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 Head of Programme 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 Head of Programme no later than two (2) working days after the 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 who fails to write it, shall be awarded a zero mark for the missed assessment.

- Any student who fails to submit an assignment on time will be penalized with a 5% deduction in marks for each day that the assignment remains outstanding, subject to a student producing a valid reason or a Doctors certificate.

4.2.5 ***Re-registration rules***

Rule G16 of the General Handbook for students applies.

(Approved: Senate 29/08/2012)

4.2.6 **Progression Rules**

A first year student who fails 50% +1 modules with an average of less than 40% in the failed modules, at the end of year 1 of study shall not be permitted to re-register in the Medical Orthotics and Prosthetics programme. De-registration from any module is subject to the provisions of rule G6 (2)*.

In addition to the above, rules G14*, G16*, G17 and G23B* are applicable.

(Approved: Senate 13/11/2019)

4.2.7. **Interruption of studies**

In accordance with Rule G23 B(2) and (3), the minimum duration for this NQF level 8 programme will be four (4) years of registered study, and the maximum duration will be six (6) years of registered study, including any periods of WIL. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration. *(Approved: Senate 29/08/2012)*

3.3.9 **Student Appeals**

Rule G1 (8) of the DUT General Handbook applies.

5. MODULE CONTENT

NB: Students are to read this section in conjunction with the relevant study guide. Detailed assessment plans will be found in the Study Guides.

The year one / level one modules are afforded in the first and / or second semester.

Module name & code	Learning areas/ content	Assessment Plan
Year 1		
PHYSICS (PSIC101)	Terminology and units, Vector and scalar quantities, Linear/angular motion and motion of a solid body, Resolution of forces and movements in two dimensions, Equations of equilibrium, Free body diagrams, Calculations of centre of gravity and mass, Newton's Laws of Motion, Work, power and energy, Strength of materials: stress, strain and Hooke's Law.	48 contact hours/ 120 notional hours Lectures 48hrs Tutorials 18hrs Independent study 48hrs Assessment 6hrs Assessment Plan —There is no final examination for this module. See Study Guide for details.
Cornerstone(CSTN101)	Serviced by the institution	48 contact hours/120 notional hours
MATHEMATICS (MTMS101)	Elementary mathematics: simple algebraic manipulation, indices, logarithms, solution of equations, trigonometric functions, standard trigonometric identities, solution of simple trigonometric equations; Functions: polynomial, rational, exponential, logarithmic; Differentiation: simple techniques, use in optimisation and curve sketching; Integration: simple techniques,	32 contact hours/ 80 notional hours Lectures 32hrs Tutorials 8hrs Independent study 36hrs Assessment 4hrs **Assessment Plan** —See Study Guide for details.

	evaluation of areas, use of approximation procedures; Differential equations: first order equations, uses in biological modelling; Mastery and usage of resources such as mathematical table, formulae and calculators.	
MATERIALS SCIENCE (MTSC101)	Steel and its alloys, Non-ferrous metals and their alloys; Plastics: thermo-forming, thermosetting; Composites, polyurethanes/E.V.A., Silicones, Wood, Leather, Plaster of Paris, Adhesives.	48 contact hours/ 120 notional hours Lectures 48hrs Assignments 15hrs Independent study 48hrs Assessment 14hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
BIOMECHANICS I (BIMC101) -	The anatomical planes and reference points of the body; Ranges of movement (lower/upper limbs and spine), normal gait (introduction to kinematics, kinematics and EMG studies), introduction to amputee and pathological gait, Kinematic analysis of limbs; Introduction to relevant biological tissues and their mechanical properties; Prosthetic and orthotic measurement techniques; Anatomical joint types, their functions and interactions; Muscle physiology and biomechanics in relation to joint functions; The interaction of anatomical joints and prosthetic/orthotic joints;	64 contact hours/ 160 notional hours Lectures 32hrs Practical's 24hrs Tutorials 16hrs Case studies 16hrs Independent study 64hrs Assessment 8hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.

	Normal human locomotion and the gait cycle; Kinetic and kinematic analysis and the calculation of external and internal force actions; Biomechanics of the lower limb, General socket biomechanics/biomechanical principles of cast rectification, Transtibial socket biomechanics and alignment biomechanics, Transfemoral socket biomechanics and alignment biomechanics; Lower limb prosthetic components and their application; Foot biomechanics —analysis of joint forces (normal, pathological, effects of footwear).	
ANATOMY I (ANMY101)	**Module content** Introduction and Definition of anatomy; Anatomical position, Anatomical terminology and terms of reference, Anatomical planes and movements; Integumentary system; Introduction to Systems: Skeletal; Muscular (muscle tissue, architecture of muscle); Articular; Cardiovascular and Nervous. Back, Upper limbs and Lower limbs	120 contact hours/ 200notional hours Theory 20hrs Practical's 60hrs Self-study 120hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
PRINCIPLES OF ORTHOTICS AND PROSTHETICS I (POPR101)	Transtibial Prosthetics: Transtibial Prosthetic Types, Post-operative fitting, Management of lower extremity, CAD CAM Technology, Plaster	112 contact hours/ 280 notional hours Lectures 56hrs Practical's 42hrs Tutorials 28hrs Case studies 28hrs

	and Casting Techniques, Transtibial prosthetic componentry and manufacturing devices; Footwear and Foot Orthotics: The Orthopaedic Shoe, Footwear and Adaptations; Foot Orthotics: Introduction to foot orthotics, Innersoles, UCBL, Day Splints/ Night Splints, Extensions, Pads, bars and domes, Diabetics and Wound healing, Chronic and Acute conditions, Prefabricated, System innersoles by numbers, Combination devices, CAD CAM Technology, Plaster and Casting Techniques, Footwear and foot orthotics componentry and manufacturing devices; Ankle-Foot-Orthotics- Introduction to ankle foot orthotics, Functional goals of below the knee orthoses, Orthotic, Orthopaedic And Anatomical Terminology, Clinical Procedures, The Orthotics and Prosthetics Laboratory, Fractures, Traction, Clinical Evaluation and Examination.	Independent study 112hrs Assessment 14hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
CLINICAL PRACTICE I (CLCP201)	Transtibial Prosthetics; Footwear and Foot Orthotics; Foot Orthotics; Ankle-Foot-Orthoses	168 contact hours/ 320 notional hours Clinical practice 288hrs Team consultation 16hrs Report writing 16hrs **Assessment Plan** —There is no final examination for this module.

		See Study Guide for details.
Year 2		
COMPUTER AND GRAPHICAL COMMUNICATION (CGRC101)	Computer aided design software applications and Multimedia; Techniques of computer-aided patient measurement and device design and manufacture allowing computerised solution to a task; Isometric sketching and three-dimensional visualisation, First and third angle projection, Auxiliary views and sections, Use of drawing standards, Simple assembly drawings; Application of machining tolerances; Applications in orthopaedic technology.	48 contact hours/ 120 notional hours Lectures 6hrs Practical (computer) laboratory 42hrs Independent study 66hrs Assessment 6hrs **Assessment Plan** – See Study Guide for details.
ELECTRONICS (ETRN101)	Basic concepts, DC circuits, Inductance and capacitance, AC circuits, Transformers, Power supplies, Amplifiers, Feedback, Sampled data, Interference rejection techniques, Measurements, Myo-electrodes, Safety.	48 contact hours/ 120 notional hours Lectures 36hrs Tutorials 12hrs Independent study 66hrs Assessment 6hrs **Assessment Plan** – 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.	120 contact hours/ 200 notional hours Theory 20hrs Practical 60hrs Self-study 120hrs **Assessment Plan** – There is no final examination for this module. See Study Guide for details.

	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.	
Community Healthcare And Research-Introduction(CHRI101)	Reference to the study guide for a detailed background of this area of research is required.	48 contact hours/120 notional hours Lectures 28hrs Group work 20hrs Practicum 20hrs Independent study 44hrs Presentation 8hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
PHYSIOLOGY FOR MOP (PYSL102)	Anatomy and physiology are defined, the relationships between anatomy and physiology are explained, cells and tissues, integumentary system, muscular system, skeletal system, nervous system, special senses, endocrine system, cardiovascular	96 contact hours/ 160 notional hours Lectures 16hrs Practical's 32hrs Tutorials 16hrs Case studies 16hrs Independent study 80hrs **Assessment Plan** – There is no final examination for this module.

	system, immunity and the lymphatic system respiratory system, digestive system, urinary system, reproductive system.	See Study Guide for details.
BIOMECHANICS II (BIMC201)	Biomechanics of the upper limb; Joint Force Analysis; Human Movement Analysis; Lower Limb Prosthetics; Lower Limb Orthotics	48 contact hours/ 120 notional hours Lectures 24hrs Practical's 18hrs Tutorials 12hrs Case studies 12hrs Independent study 48hrs Assessment 6hrs **Assessment Plan** – There is no final examination for this module. See Study Guide for details.
PRINCIPLES OF ORTHOTICS AND PROSTHETICS II (POPR201)	Ankle Foot Orthotics and Knee Orthotics; Knee Ankle Foot Orthotics and Upper Limb Orthotics; Ankle Disarticulation and partial foot prosthesis; Knee Disarticulation Prosthetics; Transfemoral Prosthetics; Upper Limb Prosthetics	112 contact hours/ 280 notional hours Lectures 56hrs Practical's 42hrs Tutorials 28hrs Case studies 28hrs Independent study 112hrs Assessment 14hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
CLINICAL PRACTICE II (CLCP201)	Ankle Foot Orthotics; Knee Orthotic; Knee Ankle Foot Orthotics; Upper Limb Orthotics; Ankle Disarticulation and partial foot prosthesis; Transfemoral Prosthetics; Upper Limb Prosthetics	168 contact hours/ 280 notional hours Clinical practice 256hrs Team Consultations 16hrs Report writing 16hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
ETHICS AND MEDICAL LAW (EMDL101)	Professional ethics, International ethics	32contact hours/ 80 notional hours

	principles, HPCSA and national requirements, Scope of practice, Multidisciplinary and interdisciplinary interactions, Legal aspects of medical care, Applications in authentic settings.	Lectures 28hrs Case studies 4hrs Assignments 8hrs Independent study 36hrs Assessment 4hrs **Assessment Plan** – See Study Guide for details.
Year 3		
Community Healthcare and research-Intermediate(CHRN101)	Reference to the study guide for a detailed background of this area of research is required.	48 contact hours/120 notional hours Lectures 48hrs Group work 20hrs Independent study 44hrs Presentation 8hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
CLINICAL STUDIES I (CLCS101)	Inflammation, repair and healing, Inflammatory diseases, degenerative diseases, post traumatic conditions, metabolic disorders, circulatory disorders; Amputations; 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	64 contact hours/ 160 notional hours Lectures 64hrs Student presentations incl. cases studies 16hrs Self-learning 80hrs **Assessment Plan** -There is no final examination for this module. See Study Guide for details.
PSYCHOLOGY (PYCL101)	The reflective journal; Understanding a helping relationship; Understanding human development throughout the life cycle; Basic principles of social	48 contact hours/ 120 notional hours Lectures 48hrs Assignments 16hrs Independent study 52hrs Assessment 4hrs **Assessment Plan** —There is no

	constructionism and externalising conversations to a helping relationship; Understanding the effect of primary and secondary trauma; Understanding the effect of loss on intra and interpersonal level; Understand personal relationships with substances; Personal understanding of HIV/AIDS; Patient psychology: psychology of loss and psychology of disability.	final examination for this module. See Study Guide for details.
BASIC PHARMACOLOGY (BPHY101)	Basic pharmacology; Pharmacodynamics; Pharmacokinetics; Central nervous system; Autonomic and peripheral (somatic) nervous system; Non-steroidal anti-inflammatory drugs; Vaccines; Cardiovascular system; Haemopoietic system; Respiratory system; Gastro-intestinal tract; Endocrinology; Vitamins and minerals; Anti-neoplastic drugs and immune suppressors; Wound care; Dermatology; Poisoning and emergencies; HIV/AIDS; Anti-histamines	48 contact hours/ 120 notional hours Lectures 42hrs Tutorials 12hrs Assignments 12hrs Independent study 48hrs Assessment 6hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
BIOMECHANICS III (BIMC301)	Tissue Mechanics; Spinal Biomechanics; Upper Limb Biomechanics; Cranial Biomechanics; Control Systems	48 contact hours/ 120 notional hours Lectures 48hrs Tutorials 4hrs Case studies 12hrs Independent study 48hrs

		Assessment 8hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
PRINCIPLES OF ORTHOTICS AND PROSTHETICS III (POPR301)	Knee Ankle Foot Orthotics (KAFO); Hip Knee Ankle Foot Orthotics (HKAFO); Hip Orthotics (HO); Spinal Orthotics; Hernias and Trusses; Vascular Compression Therapy; Cranial Orthotics; Hip Disarticulation Prosthetics; Upper Limb Prosthetics; Breast Prosthesis	128 contact hours/ 320 notional hours Lectures 64hrs Practical's 48hrs Tutorials 32hrs Case studies 32hrs Independent study 128hrs Assessment 16hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
CLINICAL PRACTICE III (CLCP301)	Knee Ankle Foot Orthotics (KAFO); Hip Knee Ankle Foot Orthotics (HKAFO); Hip Orthotics (HO); Spinal Orthotics; Hernias and Trusses; Vascular Compression Therapy; Cranial Orthotics; Hip Disarticulation Prosthetics; Upper Limb Prosthetics; Breast Prosthesis	144 contact hours/ 240 notional hours Clinical practice 204hrs Group work 24hrs Report writing 12hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
Year 4		
Community Healthcare and research-Advanced(CHRA101)	Reference to the study guide for a detailed background of this area of research is required.	48 contact hours/120 notional hours Lectures 48hrs Practicum 20hrs Independent study 48hrs Presentation 4hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
CLINICAL STUDIES II (CLCS201)	Nervous system disorders and diseases (child and adult)(CNS and PNS) including Polio, Cerebral	96 contact hours/ 240 notional hours Lectures 96hrs Student seminars, case studies

	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	24hrs Self-study 120hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
CLINICAL PRACTICE IVA (ORTHOTICS) (CLPO401)	Prescription, fitting and check-out activities within the clinic team; General laboratory practice: use of hand tools, machine tools and materials, component production; Patient examinations, assessment., design, fitting, prescription, education & evaluation; Measuring and casting, cast rectification, fabrication, fitting, aligning & finishing devices; Case history/record keeping; Patient information, medical history, and record keeping.	192 contact hours/ 320 notional hours Clinical practice 144hrs Special case discussions 32hrs Consultations and report writing 16hrs Self-study 128hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.
CLINICAL PRACTICE IVB (PROSTHETICS) (CLPP401)	Assessment, design, prescription, fitting, evaluation, education and check-out activities within the clinic team; General laboratory practice: use of hand tools, machine tools and materials, component production; Patient examinations and prescription; Measuring and casting, cast rectification, fabrication, fitting, aligning and finishing of devices; Case history/record keeping for	192 contact hours/ 320 notional hours Clinical practice 144hrs Special case discussions 32hrs Consultations and report writing 16hrs Self-study 128hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details.

	patient information, medical history, current prosthesis, prosthetic delivery.	
CLINIC, LABORATORY AND BUSINESS MANAGEMENT (CLBM101)	Materials acquisition, handling and stock control; Workforce management; Production cost calculations; Budgeting, invoicing, receipting and accounting; Clinic management, appointment systems, record keeping; Property management, care and maintenance; Environmental/ecological considerations; Entrepreneurship Theory; Business Plan development; Marketing; Operations Management; Human Resources; Presentation Skills	64 contact hours/ 160 notional hours Self-study 64hrs Group work 24hrs Lectures 64hrs Assessment 8hrs **Assessment Plan** - There is no final examination for this module. See Study Guide for details.
ADVANCED CLINICAL PRACTICE (ACLP401)	Clinical practice in a facility of the student's choice outside the designated centre used for training; This could include private practices/training centre nationally or internationally, as arranged by the student in consultation with the clinical coordinator/HOD.	32 contact hours/ 80 notional hours Independent 64hrs Reflective Integrated assignment 16hrs **Assessment Plan** —There is no final examination for this module. See Study Guide for details. Includes a report of completed hours spent at a suitable facility, as supplied by the Department of O & P.

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