

BSc (Hons) Physiotherapy (4 Years F/T) - SC401 (Pending Approval)

1. Special Note

The Programme is designed to be a professional course, like the BSc (Hons) Medical Science run by the Department of Medicine, and the BSc (Hons) Biomedical Sciences and the BSc (Hons) Occupational Therapy Programmes currently run by the Department of Health Sciences. Accordingly, the degree of flexibility will differ from most BSc (Hons) Programmes being run by the Faculty. All modules are compulsory and assessment methods will be specific to the modules. The programme is designed so that a number of modules are taken jointly with students registered for BSc (Hons) Occupational Therapy.

The programme design has taken into account the minimum requirements for the training and education of Physiotherapists set by the World Confederation of Physical Therapy.

2. Objectives

The disability profile as indicated in the 2000 Housing and Population Census carried out by the Ministry of Finance and Economic Development revealed a 46.5% increase in the prevalence of disabilities when compared to the 1990 Census. Interestingly although more males than females were among the disabled population in 1990 and 2000, the female disabled population had been growing at a faster rate than the corresponding male population. New fields like SPORTS, MEDICINE, INDUSTRY, NGO's, HOMES FOR THE ELDERLY show an absence of participation from Qualified Physiotherapists.

Physiotherapy is the skilled use of physiologically-based movement techniques, supplemented when necessary by massage, electrotherapy and other physical means for the prevention and treatment of injury and disease. It is used to assist the process of rehabilitation and restoration of function, including the achievement of personal independence. The work of the Physiotherapist is therefore essential to ensure a good quality of life of individuals (ranging from children to the elderly) with various disabilities (physical, neurological, psychosocial, sensory and other...) and rehabilitation needs and their integration in the community. The specific objective of the therapist is to function as an integral part of a multidisciplinary team to enable those whose abilities in productivity, self-maintenance and leisure are threatened, restricted or lost due to impairment, developmental delay, ageing or lack of opportunity, to become full and productive members of the community. Physiotherapists are therefore of paramount importance in the effective operation of the health care, social welfare and education systems. Physiotherapists play an important role in preventive medicine which includes all pathologies of musculo-skeletal system at all ages.

The first three years of study have been designed to equip students with all the basic training needs of a Physiotherapist for general practice, including implementation of treatment after effective Physiotherapy Assessment, good communication and interpersonal skills and commitment to ethical and social responsibility. The fourth year of study leads to the award of a BSc (Hons) Physiotherapy and is designed to meet the research and administrative and management needs of the profession, including exposure to clinical electives. The clinical education training will provide the opportunity for translation of theoretical knowledge into hands-on practice of immediate relevance and will further help students in acquiring professional competence. Graduates with this degree can either pursue higher studies (MSc, MPhil/PhD) or seek employment locally and internationally.

The Programme being proposed is a very wide-reaching programme, open to private candidates as well as in-service trainees from various Ministries (including Health and Quality of Life, Social Security, Education and Human Resources), Non-Governmental Organisations and Private Organisations as well as individuals. Physiotherapists are employable in a wide range of areas (public and private health institutions, schools, NGOs, Physiotherapy departments of main hospitals and clinics, homes for the elderly, sports, Medicine, Clinics, Industry) and can also choose private practice after 2 years post qualification.

3. General Entry Requirements

As per General Entry Requirements for admission to the University for undergraduate degrees.

4. Programme Requirements

Credit in at least five subjects (School Certificate) including English, Biology, Mathematics, Physics and at least one other Science subject.

GCE Advanced Level passes (or equivalent) in three science subjects. Mathematics will count as a Science subject. Minimum grades should be two Bs and one C.

5. Programme Duration

	Normal	Maximum
BSc (Hons) Physiotherapy (F/T):	8 semesters (4 years)	12 semesters (6 years)

A Diploma exit point will only be available in special cases where a student has failed to obtain the minimum number of credits for the award of the BSc (Hons) Physiotherapy, but has obtained a minimum of 60 credits altogether which has to include the design of the research proposal.

6. Credits per Year

Minimum 18 credits, Maximum 48 credits subject to regulation 5 above.

7. Specifications

Clinical Education Training in the form of clinical practice in Ministry of Health hospitals and other public/private institutions, homes for the elderly, private clinics will form an essential part of the Professional Programme. Clinical practice will be undertaken for a day/week in semesters 2, 3 and 4, three days/week in Semesters 5 and 6 and four days/week in semesters 7 and 8. A formal agreement will need to be worked out with the Ministry of Health, the Ministry of Social Security, and Ministry of Youth and Sports for students to use existing facilities for clinical education. Formal lectures/tutorials/practicals will be scheduled over the rest of the week as per Programme Structure. Students will be required to wear shorts and T-shirts for practical classes and practise techniques on one another.

Students must pass all modules (equivalent to 118 credits) in the Programme to be awarded the BSc (Hons) Physiotherapy.

8. Assessment

Continuous and Written Assessment of Modules

Each module will carry 100 marks (i.e. expressed as %) and will be assessed yearly as follows (unless otherwise specified):

- **Written Exams**

Modules will be examined at the end of the year in which they are taught. **The pass mark will be 50% for all papers.**

Modules to be assessed by a 2 hr written exam paper:

Year 1

HLS 1122	HLS 1241	PTH 1112
HLS 1221	BMS 1121	HLS 1231

Year 2

HLS 2112	HLS 2222	PTH 2112
HLS 2122	PTH 2211	PTH 2212
HLS 2212	PTH 2231	

Year 3

HLS 3211	HLS 1242
HLS 3212	PTH 4121
PTH 3111	PTH 3211
PTH 3112	

Year 4

PTH 4111	PTH 4211
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The following pairs of modules will be assessed jointly by **a 3 hr written exam paper:**

Year 1

HLS 1112 and HLS 1212
PTH 1121 and PTH 1221

Year 2

PTH 2111 and PTH 2221

Year 3

PTH 3111 and PTh 3211

Year 4

PTH 4111 and PTH 4211

- **Clinical Education Training**

Clinical training is distributed throughout every year of the curriculum in the form of Clinical Physiotherapy modules, 3 credits in year 1 semester 2 (equivalent to 90 hrs out of which 30 hours of clinical reasoning and 60 hours of patient presentation), 6 credits each for the years 2-4 (equivalent to 180 hrs out of which 60 hours of clinical reasoning and 120 hours of practical work on patients) and additional time spent in Clinical Blocks (180 hrs per semester over semesters 5 and 6, and 270 hrs per semester over semesters 7 and 8).

To ensure a depth of learning, clinical education will be guided and workplace skills assessed by a learning contract (an agreement about the particular knowledge, skill, or attitudes the student will develop as well as the roles and responsibilities of the student) and supervised and assessed

by practising physiotherapists preferably with at least three years' experience or a physiotherapy lecturer.

All clinical and written exams will carry a weighting of **60%** of the total marks with continuous assessment counting for the remaining **40%** of the marks, except for the Clinical Physiotherapy I module which will be assessed wholly by continuous assessment (submission of a portfolio, classtest and practicals).

Students' abilities (essential knowledge, skills and attitudes for competent practice) will be assessed for the 6-credit Clinical Physiotherapy modules by an end of year clinical examination of one hour duration.

Students must demonstrate that they have achieved the learning objectives specified in the learning contract. For the additional clinical blocks of 180 and 270 hrs each, students will be assessed by continuous assessments and successful students will be awarded a satisfactory grade (Grade S). Students with unsatisfactory performance in the clinical blocks will be awarded a Grade U. Additional Clinical Blocks do not carry any credit. However a Grade S is required in these Clinical Blocks for the award of a BSc (Hons) Physiotherapy.

- **Practical Work and Continuous Assessment**

- **Modules including a Practical Component**

There will be no practical exams. Practical work will be assessed on a continuous assessment basis and will carry a weighting of 50% of the total marks awarded for the respective modules involved. The pass mark for the continuous assessment of practical work will be 50%.

Continuous assessment for the theory part of modules having a practical component may be in the form of assignments and should include at least one class test and will carry a weighting of 10% of total marks for the module.

- **Modules not including a practical component**

Continuous assessment for modules not including a practical component may be in the form of assignments and should include at least one class test and will carry a weighting of 30% of total marks for the respective modules.

- **For PTH modules**

Students who fail in up to 2 PTH modules, will be allowed to proceed to the following year if their CPA ≥ 50 , and clearing the failed modules with the next cohort of students. However, students will not be allowed to take follow-up (clinical) PTH modules. Students who fail in more than 2 PTH modules will repeat the year.

9. Grading Structure

This will be as shown below taking into account that the pass mark for all modules is 50%

GRADE POINT AVERAGE (GPA)

Under the GPA, the following letter grades and their grade point equivalent are used:

Letter Grade	Grade Point	Percentage Mark
A ⁺	4.00	$90 \leq x \leq 100$
A		$80 \leq x < 90$
A ⁻		$70 \leq x < 80$
B ⁺	3.00	$65 \leq x < 70$
B		$60 \leq x < 65$
C	2.00	$50 \leq x < 60$
F	0	$x < 50$

10. Classification of Award

The degree classification will be based on the CPA at the end of the Programme as follows:

CPA (%)	CLASSIFICATION	
$\geq 70\%$	1 st Class	with Honours
$60 \leq x < 70$	2 nd Class 1 st Division	
$50 \leq x < 60$	2 nd Class 2 nd Division	
< 50	No Award	

11. Repeat and Termination of Registration

If the CPA of a student is < 50 for an academic year, the student will have to repeat the entire academic year, and retake modules as and when offered. However, s/he will not be required, if s/he wishes, to retake modules for which Grade C or above has been obtained.

Students will be allowed to repeat only once over the entire duration of the Programme of Studies.

Registration will be terminated if the CPA of the student remains below 50 at the end of an academic year and the student has already repeated one year of study.

A student's registration will lapse at the end of the semester in which s/he has successfully completed the minimum requirements for the award of the degree.

12. Modules of Special Nature

Audit Modules

Students who wish to follow specific module(s) or are advised to do so by the Department may audit same. Such Audit modules are not examinable but will appear in their transcript subject to satisfactory attendance (Grade S).

Self-Study Modules

Self-Study modules for unsuccessful candidates will only be available for non-professional modules.

13. Important Note

The rules as stipulated in this Programme Structure and Outline Syllabus will replace all other rules and regulations.

14. List of Modules

Code	Module Name	Hrs/Yr L/P	Credits
<u>Year 1</u>			
<i>Optional modules as per individual requirements</i>			
BMS 1011	Foundation Course in Biology	60/30	-
BMS 1012	Foundation Course in Physics	60/30	-
Semester 1			
BMS 1121	Introduction to Human Anatomy and Physiology	45/0	3
PTH 1112	Assessment Techniques	45/0	3
HLS 1112	Health in Society 1	45/0	3
HLS 1122	IT and Communication Skills for Health Sciences	30/30	3
PTH 1121	Movement Science I (Exercise Therapy)	30/30	3
Semester 2			
HLS 1212	Health in Society 2	45/0	3
HLS 1221	Cardiovascular System	45/0	3
HLS 1231	Skeletal and Locomotor Systems	45/0	3
HLS 1241	Lungs and Respiratory Tract	45/0	3
PTH 1211	Clinical Physiotherapy I		3
PTH 1221	Movement Science II (Massage and Electrotherapy)	30/30	3
<u>Year 2</u>			
Semester 1			
HLS 2112	Health in Society 3	45/0	3
HLS 2122	Nervous System 1	45/0	3
PTH 2011Y	Clinical Physiotherapy II	0/90	-
PTH 2111	Movement Science III (Orthopaedics & Neuro-musculo-skeletal)	30/30	3
HLS 2212	Basic Pathology	45/0	3
PTH 2112	Biomechanics, Kinesiology and Ergonomics	45/0	3
Semester 2			
HLS 2222	Nervous System 2	45/0	3
PTH 2212	Physiotherapy Techniques I	30/30	3
PTH 2011Y	Clinical Physiotherapy II	0/90	6
PTH 2211	Women and Child Health	45/0	3
PTH 2221	Movement Science IV (Cardiorespiratory & Paediatric Neurology)	30/30	3
PTH 2231	Medicine and Surgery	45/0	3
<u>Year 3</u>			
Semester 1			
PTH 3112	Physiotherapy Techniques II	30/30	3
PTH 3011Y	Clinical Physiotherapy III	0/90	-
PTH 3111	Movement Science V (Orthopaedics & Neuro-musculo-skeletal)	30/30	3
PTH 4121	Practice Management	45/0	3
HLS 3211	Basic Pharmacology	45/0	3
Semester 2			
PTH 3011Y	Clinical Physiotherapy III	0/90	6
PTH 3211	Movement Science VI (Cardiorespiratory & Adult Neurology)	30/30	3
HLS 1242	Psychology for Health Professions	45/0	3

HLS 3212	Health Research Methods	45/0	3
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Year 4

Semester 1

PTH 4000	Research Project	-	-
PTH 4011Y	Clinical Physiotherapy IV	0/90	-
PTH 4111	Movement Science VII (Intensive Care)	30/30	3

Semester 2

PTH 4000	Research Project	-	10
PTH 4011Y	Clinical Physiotherapy IV	0/90	6
PTH 4211	Movement Science VIII (Specialised Topics)	30/30	3

15. Programme Plan - BSc (Hons) Physiotherapy

YEAR 1

Semester 1			Semester 2		
Code	Module Name	Credits	Code	Module Name	Credits
BMS 1011 or BMS 1012	Foundation Course in Biology or Foundation Course in Physics	-	BMS 1011 or BMS 1012	Foundation Course in Biology or Foundation Course in Physics	-
HLS 1112	Health in Society 1	3	HLS 1212	Health in Society 2	3
BMS 1121	Introduction to Human Anatomy and Physiology	3	HLS 1221	Cardiovascular System	3
PTH 1112	Assessment Techniques	3	HLS 1231	Skeletal and Locomotor Systems	3
HLS 1122	IT and Communication Skills for Health Sciences	3	HLS 1241	Lungs and Respiratory Tract	3
PTH 1121	Movement Science I (Exercise Therapy)	3	PTH 1221	Movement Science II (Massage & Electrotherapy)	3
			PTH 1211	Clinical Physiotherapy I	3

YEAR 2

Semester 1			Semester 2		
Code	Module Name	Credits	Code	Module Name	Credits
HLS 2112	Health in Society 3	3	PTH 2212	Physiotherapy Techniques I	3
HLS 2122	Nervous System 1	3	HLS 2222	Nervous System 2	3
PTH 2011Y	Clinical Physiotherapy II	-	PTH 2011Y	Clinical Physiotherapy II	6
HLS 2212	Basic Pathology	3	PTH 2211	Women & Child Health	3
PTH 2111	Movement Science III (Orthopaedics & Neuro- musculo-skeletal)	3	PTH 2221	Movement Science IV (Cardiorespiratory & Paediatric Neurology)	3
PTH 2112	Biomechanics, Kinesiology and Ergonomics	3	PTH 2231	Medicine & Surgery	3

YEAR 3

Semester 1			Semester 2		
Code	Module Name	Credits	Code	Module Name	Credits
PTH 3112	Physiotherapy Techniques II	3	HLS 1242	Psychology for Health Professions	3
PTH 3011Y	Clinical Physiotherapy III	-	PTH 3011Y	Clinical Physiotherapy III	6
PTH 3111	Movement Science V (Orthopaedics & Neuro- musculo-skeletal)	3	PTH 3211	Movement Science VI (Cardiorespiratory & Adult Neurology)	3
HLS 3211	Basic Pharmacology	3	HLS 3212	Health Research Methods	3
PTH 4121	Practice Management	3			

YEAR 4

Semester 1			Semester 2		
Code	Module Name	Credits	Code	Module Name	Credits
PTH 4000	Research Project	-	PTH 4000	Research Project	10
PTH 4011Y	Clinical Physiotherapy IV	-	PTH 4011Y	Clinical Physiotherapy IV	6
PTH 4111	Movement Science VII (Intensive Care)	3	PTH 4211	Movement Science VIII (Specialised Topics)	3

16. Outline Syllabus

This outline syllabus is not prescriptive and is intended to serve as a guide only.

**All modules pertaining to 'Movement Science' I–VIII will contain components of relevant instrumentation and techniques.*

BMS 1011 - FOUNDATION COURSE IN BIOLOGY

This module will be equivalent in level to Biology A level and will be compulsory for students not holding A levels in Biology. The A level syllabus (Core subjects + relevant electives) prevailing at the time the module is being taught will be adopted. Includes a practical component.

BMS 1012 - FOUNDATION COURSE IN PHYSICS

This module will be equivalent in level to Physics A level and will be compulsory for students not holding A levels in Physics. The A level syllabus (Core subjects + relevant electives) prevailing at the time the module is being taught will be adopted. Includes a practical component.

In this module, the physics relevant to electrotherapy and

- (1) Basic electrical equipment;
- (2) Basic electrical components; and
- (3) MECHANICS must be dealt with.

BMS 1121 - INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY

Introduction to human anatomy: anatomical terminology and topography. The endocrine system. The central and peripheral nervous system. The gastrointestinal system: nutrition and digestion. Structure and function of circulatory system: heart, blood vessels, lymphatics, lymph nodes, spleen. Control of heart beat and the cardiac cycle. Structure and function of kidneys: excretion and osmoregulation. Mechanism and control of breathing. Control of growth and reproduction in man. Support, movement and muscle contraction: major muscle groups, ultrastructure of skeletal muscle, contractile mechanisms, skeleton, hard connective tissue. Integument: structure and function of skin, buccal cavity, teeth. General principles and social aspects of human health and disease: diet, gaseous exchange, exercise, drugs, infectious diseases. Fundamentals of the immune system and immune responses. Immune regulation. Autoimmune diseases.

HLS 1112 - HEALTH IN SOCIETY 1

The three broad themes in this module are:

- Health
- Family
- Normal human development

Health: Different views on the meaning of health.

Family: An introduction to the functions of the family, factors that influence family life in Mauritius.

Normal human development, including sexuality: the developmental stages in life: infancy, childhood, adolescence, adulthood, and old age. An overview of motor, emotional, psychological development through the stages of development.

Family study project. This should be done with a family that has a child with disability.

HLS 1122 - IT AND COMMUNICATION SKILLS FOR HEALTH SCIENCES

Introduction to computers. The role and impact of IT and computers in modern society.

Principles of written communication; academic writing skills.

Principles of oral communication.

Practical (computer) skills: (i) word processing; (ii) designing and orally delivering an academic presentation; designing and presenting an academic poster; (iii) constructing a spreadsheet.
Information Technology skills: (i) Internet; (II) email.

HLS 1212 - HEALTH IN SOCIETY 2

Overview of Non-Communicable Diseases: Diabetes Mellitus, Cardiovascular Diseases, Renal failure, Cancer, Rheumatism.

The concept of Burden of Disease.

Non-Communicable Diseases in Mauritius – prevention, control, complications.

Overview of the field of Epidemiology.

The elderly: falls and their prevention. The situation in residential homes in Mauritius.

Death and dying – the stages in adjustment to dying, bereavement and grief, with emphasis on the loss experienced by people who become permanently disabled.

Palliative care.

Patient study: impact of chronic condition.

HLS 1221 - CARDIOVASCULAR SYSTEM

The basic anatomy and function of the heart and pericardium will be discussed with the function and microanatomy of cardiac muscle. Septation of the heart and the foetal circulation will be considered in outline. Pressure changes and sounds during a single cardiac cycle together with the associated electrical events will be stressed. In addition nervous control of heart rate and hormones which have major effect will be included as will drugs such as atropine, calcium channel blockers and cardiac glycosides which have major effects.

The general structure of the peripheral circulation and its histology will be discussed and the mechanism by which blood returns to the heart. The baroreceptor reflexes and other controllers of blood pressure will be included as will some central control mechanisms. Diseases of the heart and circulation will be considered briefly.

HLS 1231 - SKELETAL AND LOCOMOTOR SYSTEMS

Biochemistry and physiology of connective tissues and collagen. Review calcium homeostasis. Classification, structure and function of joints. Anatomy of the upper limb: shoulder joint and the rotator cuff; the axilla and the brachial plexus; elbow joint and cubital fossa; flexor and extensor compartments of upper arm; wrist joint and hand; flexor and extensor compartments; movements of pronation and supination. Blood and nerve supply to the upper extremities.

Axial skeleton and load bearing: anatomy of the vertebral column; regional variations in vertebral structure; intervertebral joints; low back pain and herniation of intervertebral disc.

Anatomy of lower limb: hip joint; flexors, extensors and adductors of the hip; Anatomy of the femur. The knee joint; flexors and extensors of the knee. Ankle joint and movement at the ankle. The foot. Biomechanics of joint. Nerve supply to the lower limb. Blood supply to lower limb.

Rheumatic, neurologic, orthopaedic and traumatological conditions. Introduction to rehabilitation.

Muscle contraction mechanisms and nervous control.

HLS 1241 - LUNGS AND RESPIRATORY TRACT

The basic anatomy of the thorax and diaphragm will be explored and the way the rib cage moves during ventilation under the influence of various respiratory muscles discussed. The pressures in the pleural cavity and other changes during a ventilatory cycle will be described as will movement and flow in the airways. Gas exchange across the alveoli will be described and effects of altering the various partial pressures of gasses explored. Narrowing of the airways and its consequences will be given prominence together with drugs which alter the resistance of the airways. The importance of chronic disease and cyanosis will be emphasised. Common pathologies of the lung and respiratory tract such as asthma, bronchitis, cystic fibrosis, etc.

HLS 1242 - PSYCHOLOGY FOR HEALTH PROFESSIONS

Introduces students to some of the major theoretical perspectives in Psychology on the nature of human beings, and to the concept of psychological development, with emphasis placed on the cultural contexts of human development.

HLS 2112 - HEALTH IN SOCIETY 3

Community-Based Rehabilitation. What is Community-Based Rehabilitation (CBR)? The rationale for CBR. Its origins and history abroad and in Mauritius. The role players: Professionals, Community Rehabilitation Workers (CRW) and community members, their contributions and obligations. Community-based activities. Management of a CBR Programme. Students attend fieldwork in the community.

Introduction to various health organisations existing in Mauritius. Primary health care, community health, health promotion in Mauritius (public participation). Area Health Centres, Occupational health, Public health, WHO, Private clinics. The impact of these health organisations on health care will be examined.

HLS 2122 - NERVOUS SYSTEM 1

Gross topography of the brain and spinal cord; anatomy of the skull; meninges and blood supply to the brain. Production and circulation of the CSF; cranial nerves. Major conditions that affect the CNS: Cerebro Vascular Accident (CVA), Traumatic Brain Injury, Cerebral palsy, Spinal Cord Injury, Spina Bifida, Guillian Barre, Cerebellar Ataxia, Parkinson's disease, Multiple Sclerosis: their causes, clinical features and basic medical management.

HLS 2212 - BASIC PATHOLOGY

Review of basic cell biology. Introduction to pathology. Characteristics of disease. Nomenclature and classification of disease. Genetic and environmental causes of disease. Diagnostic pathology. Sublethal and lethal injury. Toxic and hypoxic injury. Agents causing injury. Apoptosis and necrosis. Abnormal tissue deposits. Acute inflammation: basic mechanisms and sequelae. Chronic inflammation. Healing and repair, including bone and skin repair. Overview of: cardiovascular disease, urinary and reproductive system disease, respiratory disease, gastrointestinal and liver disease.

HLS 2222 - NERVOUS SYSTEM 2

Neurons: Upper and lower motor neurons. Degeneration and regeneration of nervous tissue.

Receptors, e.g. muscle spindles and Golgi Tendon Apparatus, motor end plates, motor and sensory pathways. The autonomic nervous system.

Plexuses. Peripheral nerve injuries: their causes, classification, clinical features and basic medical management.

The visual system.

HLS 3211 - BASIC PHARMACOLOGY

A basic understanding of how drugs work, beginning with pharmacokinetics, receptor binding, transport of drugs intracellularly, absorption, excretion, volumes of distribution and clearance. It is anticipated that some of this module will be taught by computer-assisted learning. Examples of drugs will be given in this module whereas more specific actions will be dealt with in appropriate modules.

HLS 3212 - HEALTH RESEARCH METHODS

Importance of research for the therapy professions. Ethical considerations for health professionals.

Research paradigms; scientific method; Evidence-Based Practice; quantitative and qualitative research.

Research designs in quantitative and qualitative research

Measurements in the therapy professions.

Critiquing a research article.

Surveys, single subject research, questionnaires.

Doing research as part of clinical practice.

Basic statistical concepts. Practical: computer based statistical package.

Writing a research protocol.

PTH 1112 - ASSESSMENT TECHNIQUES

Gross anatomy of musculoskeletal system. Muscle testing. Goniometry. Overview of pathologies encountered in physiotherapy. Concepts in exercise therapy.

***PTH 1121 - MOVEMENT SCIENCE I (EXERCISE THERAPY)**

Objectives: To prepare the student for the clinical physiotherapy I module on the second semester (45 Hours Theory).

This module focuses on:

Presentation of the profession of physiotherapist; Visit to main physiotherapy departments of the island; Importance of anatomical position with study of planes of action; Topographic anatomy of main muscle groups of the body; Naming of various movements that occur in the musculo- skeletal system; Classification of different types of movement and ranges of movement; Fundamental and derived positions for remedial gymnastics; Patient handling techniques; Physiological walking and walking aids; Muscle testing(Oxford scale) and methods of muscle strengthening.

PTH 1211 - CLINICAL PHYSIOTHERAPY I

30 hours theory (clinical reasoning); 60 hours patient presentation.

Exposure of students to the clinical environment under the supervision of a qualified physiotherapist. Students will not directly handle patients, but will have opportunity to interact with patients and formal and informal caregivers of patients through interviews, history taking and observations. In preparation for this module, the student is required to observe the clinical examination and treatment of patients. At the end of the module, the student should produce a written report on case study or observations during the clinical placement. During this module, they will be in contact with medical and nursing staff and observe the basic procedures of nursing.

***PTH 1221 - MOVEMENT SCIENCE II (MASSAGE AND ELECTROTHERAPY)**

Electrotherapy (40 hours):

This includes the theory and practical demonstration of electrotherapeutic and other physical agents in electrotherapy: Low frequency currents; Medium frequency currents; High frequency currents: short wave and micro wave diathermy; Ultrasound; Electro thermotherapy: Infra red; Laser; Cryotherapy.

Massage (20 hours):

This includes the theory of physiological and therapeutic use of massage.

Different massage techniques; Indications of specific massage techniques: Cyriax transverse friction, lymphatic drainage, connective tissue massage.

The massage module is completed by practical work in Clinical Placement modules throughout the 4 years of training.

PTH 2011Y - CLINICAL PHYSIOTHERAPY II

60 hours Theory (Clinical reasoning).

120 Hours Practical work on patients.

Under the supervision of a lecturer or qualified Physiotherapist (min 3 years experience), the students spend a portion of the week in various clinical areas covering paediatrics, orthopaedics, geriatric, neuro-musculo-skeletal, obstetrics and gynaecology.

From the Doctor's diagnosis, the students are expected to proceed to a Physiotherapy Evaluation before applying appropriate treatment. Each patient will be recorded on an appropriate treatment card of the University of Mauritius.

***PTH 2111 - MOVEMENT SCIENCE III (ORTHOPAEDICS & NEURO-MUSCULO-SKELETAL)**

This module focuses on a general classification of fractures and dislocations. This will be followed by detailed explanation of all fractures of upper limbs and lower limbs with special emphasis on the physiotherapy approach for the period of immobilisation and post immobilisation. X-ray reading.

Soft tissue and articular lesions met in sports medicine and appropriate physiotherapeutic treatment will be dealt with.

PTH 2112 - BIOMECHANICS, KINESIOLOGY AND ERGONOMICS

Kinematics. Clinical gait analysis. Basic kinetics: Newton's Laws. Kinetics in bodily movements. Inverse Dynamics: Moments. Calculation of moments about joints. Calculation of muscle and joint forces. Linear work, Energy and power. Strength testing and training. Includes walking gait analysis. Ergonomics: Work and study posture.

PTH 2211 - WOMEN AND CHILD HEALTH

Women Health: Will cover pregnancy and the changes that this brings to the mother, as well as parturition; Pre and post natal exercises; Mastectomy.

Child Health: Will cover Epidemiology of childhood disability in Mauritius; Prevention of childhood disabilities; Physiotherapy management of skeletal congenital abnormalities.

PTH 2212 - PHYSIOTHERAPY TECHNIQUES I

Neuromuscular techniques: Kabat, Bobat and Klein. Hydrotherapy. Tapping. Theraband.

First aid physiotherapy.

***PTH 2221 - MOVEMENT SCIENCE IV (CARDIORESPIRATORY AND PAEDIATRIC NEUROLOGY)**

Cardiorespiratory (15 hours): This component covers the theory and practical application of cardiopulmonary rehabilitation in medical conditions in children and adults, such as asthma, chronic bronchitis, lung abscess, and bronchiectasis.

Specific techniques management of respiratory conditions.

Physiotherapy management in cardiac problems.

Paediatric Neurology (45 hours): This component covers the theory of child development, most common neurological lesions met in paediatrics will be dealt with and proper neuromuscular facilitation techniques will be demonstrated. The conditions mostly met in Mauritius are as follows:

Cerebral palsy, polyhandicap, muscular dystrophy, spina bifida cystica, epilepsy, lereodystrophy, Infantile hemiplegia, floppy baby myotonia, etc. Reflexes.

PTH 2231 - MEDICINE AND SURGERY

Will cover the aetiology, clinical signs and symptoms, assessment and medical and surgical treatment of patients, in all age groups suffering from conditions encountered in physiotherapy.

PTH 3011Y - CLINICAL PHYSIOTHERAPY III

Students will spend a portion of the week in the physiotherapy department of the main hospitals of the country. The students will work in pairs under the supervision of a lecturer or qualified physiotherapist (minimum 3 years experience).

From the Doctor's diagnosis, they will proceed to a physiotherapeutic evaluation and will propose a treatment program approved by the lecturer or qualified physiotherapist.

The students will keep a written record of the treatment. All pathologies commonly referred to physiotherapy will be dealt within this module.

***PTH 3111 - MOVEMENT SCIENCE V (ORTHOPAEDICS & NEURO-MUSCULO-SKELETAL)**

This component is a progression of previously learnt techniques (PTH 2011Y) and will especially deal with the following subjects.

Manual therapy of peripheral joints and vertebral column.

Spinal cord lesions: paraplegia, tetraplegia, causes, physiotherapeutic evaluation, rehabilitation, social re-integration.

Joint replacement: hip, knee, shoulder, indications and treatment of these procedures.

PTH 3112 - PHYSIOTHERAPY TECHNIQUES II

Mobilisation and Manipulation: Maitland, Sohler, Kaltenborn, Fitdenkhrik.

Pulley therapy. Vestibular rehabilitation.

***PTH 3211 - MOVEMENT SCIENCE VI (CARDIORESPIRATORY & ADULT NEUROLOGY)**

Cardiorespiratory (20 Hours):

This module covers the theory and practical application of cardiopulmonary rehabilitation in surgical conditions in cardiology. The principles of the working and management of an Intensive Care Unit (I.C.U.) will be introduced.

Chest trauma and thoracic surgery will be dealt within this module.

Adult neurology (40 Hours):

In this module, the main Adult neurological cases met in Mauritius will be dealt with. The PHYSIOTHERAPEUTIC EVALUATION will precede the Rehabilitation programme.

The following conditions will be dealt with: Cerebrovascular accidents (C.V.A.) Hemiplegia; Parkinson disease; Multiple sclerosis; Lateral amyotrophy; Syringomyelia; Tubes dorsalis; Transverse myelitis.

PTH 4000 - RESEARCH PROJECT

Students, working individually or in groups, will conduct a research project in physiotherapy after the research protocol is approved. Students will submit a research dissertation in the prescribed format, and between 8000–12000 words.

PTH 4011Y - CLINICAL PHYSIOTHERAPY IV

Students will spend a portion of the week in Physiotherapy departments of the main hospitals of the island. The students will be working alone under the supervision of a lecturer/physiotherapist and will apply the entire physiotherapy programme after careful physiotherapeutic evaluation of their patients.

A written record of the treatment must be kept and communicate with the medical staff who has referred the patient.

***PTH 4111 - MOVEMENT SCIENCE VII (INTENSIVE CARE)**

This module includes revision (40 hours) of patophysiology of cardio-respiratory failure and technology employed in Intensive Care Unit (I.C.U.), insisting on the team work aspect.

It is important to have a knowledge of how to assess comprehensively a patient in I.C.U. and formulate appropriate problem list.

A physiotherapeutic approach in I.C.U. is important with an insight into possible dangers, precautions and contraindications which may be observed when working in I.C.U.

After this theoretical approach to I.C.U., the students should participate (20 hours) in the reality of I.C.U. where they should treat with the constant supervision of a lecturer/ physiotherapist, patients admitted to an I.C.U.

PTH 4121 - PRACTICE MANAGEMENT

Emphasis is on developing administrative skills to prepare the students for work. It includes topics on service administration, leadership, human resource development, and ethics as they relate to behaviour in the work place, legal requirements and regulations of professional boards.

***PTH 4211 - MOVEMENT SCIENCE VIII (SPECIALISED TOPICS)**

Consists of a variety of workshops/ lectures/ symposia on specialised topics within physiotherapy.

The subjects proposed are: Manual lymphatic drainage; Specialised manual therapy: maitland and sohler, etc.; Urinary incontinence: stress incontinence, urge incontinence; Sports medicine; Burns management; Hydrotherapy, Neuromeningeal mobilisation , Pre- and post Parturition exercises and Amputations.