THE FACULTY OF

MEDICAL SCIENCES

THE UNIVERSITY OF THE WEST INDIES
CAVE HILL CAMPUS

FACULTY OF MEDICAL SCIENCES
UNDERGRADUATE HANDBOOK
2023 - 2024

DISCLAIMER:

The information in this booklet is accurate at the time of printing. Subsequent publications may therefore reflect updated information. Students should consult the Dean's office where clarification is required. This booklet gives information on the undergraduate programmes of the Faculty of Medical Sciences at the Cave Hill Campus of the University of the West Indies (Barbados). For courses offered at the other Campuses, please see Faculty booklets for the Mona (Jamaica) and St. Augustine (Trinidad & Tobago) Campuses.

Note: The Cave Hill MB BS Curriculum is approved by the Academic Quality Assurance Committee (AQAC). It is accredited by the Caribbean Accreditation Authority for Medicine and other Health Professions (CAAM-HP). This accreditation has been recognised by the National Committee of Foreign Medical Education and Accreditation (NCFMEA) of the USA to be comparable to that of US Medical Schools.

THE UNIVERSITY AND THE FACULTY RESERVES THE RIGHT TO AMEND CURRICULUM, STAFFING AND REGULATIONS THAT MAY NOT BE REFLECTED IN THE CURRENT HANDBOOK. ADDENDUMS REFLECTING CHANGES ARE DISTRIBUTED AS APPRORIATE TO STUDENTS.

Table of Contents

Table of Contents (Cont'd)

INTRODUCTION TO THE FACULTY

Background

The University of the West Indies (UWI), the region's premier tertiary educational institution traces its origin back to 1948 when the University College of the West Indies was established in Mona, Jamaica as a college of the University of London. This college became the University of the West Indies in 1962. Only 33 undergraduate students were admitted in 1948 - all medical students. UWI today has campuses in Barbados, Jamaica and Trinidad and a total enrolment of over 40,000 students registered in a wide range of programmes in several faculties.

In 1967, the Faculty expanded to incorporate final year clinical teaching programmes at the Cave Hill Campus and the Queen Elizabeth Hospital in Barbados and the St. Augustine Campus and Port of Spain General Hospital in Trinidad and Tobago. In 1967 only 6 students went to each site, but the numbers quickly expanded and in 1974 it was arranged for students to complete the final 2 years in the Eastern Caribbean. With this expansion, the School of Clinical Medicine and Research was established at Cave Hill. In 1989, the Eric Williams Medical Sciences Complex was opened at Mount Hope in Trinidad and Tobago. This facility houses UWI's second full medical programme under a multi-disciplinary Faculty, with a Medical School as well as Schools of Dentistry, Pharmacy and Veterinary Medicine. In 2008 the Cave Hill Campus upgraded and expanded its School of Clinical Medicine and Research to the Faculty of Medical Sciences delivering the full 5-year MB BS programme. Currently, the Faculty of Medical Sciences at Cave Hill offers four undergraduate programmes: Medicine, Human Nutrition and Dietetics, Health Sciences and Preclinical Sciences. Over the years graduate programmes in a wide range of specialties have been developed at all campuses.

The UWIs medical programme at inception was accredited by the General Medical Council of the UK. In July 2004, The Caribbean Accreditation Authority for Education in Medicine (CAAM-HP) and Other Health Professions was established by the Governments of the Region (CARICOM). With representatives of both the GMC and the Canadian Licensing Authority on its executive, it replaced the GMC for the purpose of accreditation of medical programmes in the region. The UWI's medical programme is accredited by CAAM-HP. Other health based professional programmes are in the process of accreditation by the CAAM-HP.

Today, the University of the West Indies as a whole has the unique status of being a truly international university, serving as the principal tertiary education institution for 17 Caribbean (CARICOM) countries and, most recently, Bermuda, as well as hosting a growing number of international students.

The Faculty of Medical Sciences plays a vital role in the training of health care professionals, particularly doctors and at all levels, from undergraduate through post graduate to continuing medical education, for the entire region.

MESSAGE FROM THE DEAN

It is my greatest pleasure to welcome you to the Faculty of Medical Sciences, The University of the West Indies (The UWI), Cave Hill Campus. For our returning students, Welcome back! This year is historic as both the University and its Cave Hill Campus celebrate their 75th and 60th anniversaries respectively. I take this opportunity as a proud alumnus (like you in a few years) to congratulate the University and the Cave Hill Campus on reaching their respective milestones and maintaining their relevance in Caribbean regionality and development.

Entrants, it is also good that you have started your journey at a time when the most significant consequences of the COVID-19 pandemic are behind us. Like you, we are excited as this period is an evolved space of social interaction with technological advancements to revolutionize and advance higher education learning. Note that the Campus facilitates teaching mainly in a face-to-face environment but we also have programmes and courses which are delivered in online or blended formats. Even with the adversities of COVID-19 and other hardships, the faculty has remained aligned with the University's mission, vision, and core values. Our core values of integrity, excellence, diversity, gender justice student centeredness and financial sustainability provide a glimpse of your future in our academy. These core values are embedded in our programming and have allowed us to *remain rooted in the Caribbean but ready and rising* towards being *an excellent global university and institution of excellence*!

In academic year 2022-2023, the faculty underwent an organisational restructuring exercise and now has two departments - Department of Preclinical and Health Sciences and Department of Clinical Sciences. Most of you would have or will start your educational careers in the Department of Preclinical and Health Sciences. This department offers four undergraduate degrees:

- The first three years of the traditional 5-year Bachelor of Medicine and Bachelor of Surgery (MB BS) degree for persons wishing to become physicians. The Department of Clinical Sciences provides training for the last two years of the MB BS programme. This degree is the oldest degree at the University and is primarily responsible for training most doctors in the post-colonial Anglophone Caribbean.

- A 3-year Bachelor of Health Sciences (BHSc) for persons who wish to work in health care systems and other fields related to health. This programme started in 2016 and is offered in conjunction with the Faculties of Science and Technology, Law, Humanities and Social Sciences.

- A Bachelor of Science in Human Nutrition and Dietetics (BScHND) for persons who are training to become nutritionists and dieticians. This is a 3½-year programme and students will benefit from professional placements in the clinical, community and food service settings.

- A Bachelors of Preclinical Sciences for individuals who wish to undertake training in medicine in an articulated joint programme with the University of Ghana in West Africa. This degree will provide opportunities for qualified applicants to participate in a preclinical programme at The UWI, Cave Hill Campus and transfer to the Bachelor of Medicine & Bachelor of Surgery (MB ChB) at the University of Ghana for clinical training. Students registered for this programme this year will be the entrants of the inaugural class.

Both departments in the faculty offer graduate programmes. These include the medical and surgical specialties and a suite of taught and research programmes in the basic medical, health and paraclinical sciences and nursing. In the Department of Clinical Sciences, graduate programmes in the clinical specialties lead to the Doctor of Medicine (DM) in hospital-based programmes and include Anaesthesia and Intensive Care, Emergency Medicine, Internal Medicine, General Surgery, Orthopaedic Surgery, Ophthalmology, Obstetrics and Gynaecology, Paediatrics and Psychiatry. There is also a Diploma and DM in Family Medicine. In the Department of Preclinical and Health Sciences, there are a Master in Public Health (MPH), an Executive-Masters in Business Administration (E-MBA) in Health Care Management and a Doctor in Public Health (DrPH) programmes. The preclinical department also offers MSc Nursing degrees in Administration and Education, and a Postgraduate Diploma in Paediatric Nursing. Doctor of Philosophy programmes are offered in Pharmacology, Medical Microbiology, Immunology, Public Health and Epidemiology. Our graduates from these programmes have distinguished themselves as lecturers, researchers, specialists, family physicians, and public health practitioners across the Caribbean region and internationally.

The University and faculty have remained rooted in the delivery of quality degree programmes. The University has full institutional accreditation from the Barbados Accreditation Council. The University's oldest programme, the MBBS programme, is accredited by the Caribbean Accreditation Authority for Education in Medicine and other Health Professions (CAAM-HP). The BSc HND is currently being reviewed for accreditation by the CAAM-HP. Our Bachelors in Preclinical Sciences which can lead to the MB ChB degree after completing the three years of clinical training at the University of Ghana is accredited by the Dental and Medical Council of Ghana. Also, both departments in the faculty underwent recent quality assurance reviews by the University's Quality Assurance Unit and are actively implementing action plans addressing recommendations emanating from those reviews. Our teaching and research-based activities are done in cutting edge 21st century facilities mainly at the Cave Hill Campus, Clinical Skills Building, Queen Elizabeth Hospital, and the George Alleyne-Chronic Disease Research Centre (GA-CDRC). The GA-CDRC is a research centre which works closely with the Faculty of Medical Sciences at Cave Hill and contributes to our graduate teaching and research. Last but not least, most of you would be aware that the University is currently ranked in the top 1.5% universities in Latin America and the Caribbean and is the only Caribbean university ranked among the top global universities by Times Higher Education, a UK-based university ranking agency. One of our best assets is our students and through their vibrancy in student governance and the classroom, they help to maintain the quality of our academic programmes and atmosphere.

In closing, I welcome you once again to the academy and wish you well as you embark on this exciting journey to become successful and proud alumni of this university. I anticipate that many of you will become leaders within your professional and personal circles. Consider your successful completion of your degrees, as our endorsement of your greatness to come!

Best wishes in the years ahead.

Damian Cohall, BSc, PhD (UWI)
Dean, Faculty of Medical Sciences

MEDICAL STUDENT ASSOCIATION MESSAGE

Dear FMS Family,

It is my great pleasure to welcome our new and returning students, and staff to our prestigious Faculty. Each year, the arriving classes of new students bring with them such an exhilarating sense of promise and possibility. Our mission in FMS is to teach with creativity and dedication, to heal with quality and compassion, and to inspire discovery and innovation with integrity and purpose. As we prepare for the new school year, the FMS community reaffirms this commitment to improving the health and well-being not only to the student body on campus, but to our community; locally, regionally, and globally.

As your Representative for this academic year 2023-2024, I promise to establish partnerships and collaborations which heighten opportunities, to increase research and training and most importantly, to create a space that provides all degree programmes with a voice while fostering a true FMS Spirit where everyone feels valued and can reach their full potential. I plan to continue the legacy built by every executive before me, learning from experiences, building on successes, and creating new opportunities. With determination and pure dedication, I promise to lead the FMS student body with pride, unwavering in my pursuit of unification and exploration, while listening to the voice of those I represent.

In it all though, I hope that you will enjoy your stay with us here in FMS. I wish you all a fruitful academic life and a lot of fun among your colleagues and staff members. As Roy T. Bennett said, “The one who falls and gets up is stronger than the one who never tried. Do not fear failure but rather fear not trying”. Welcome once again to the UWI, Cave Hill FMS!

Chad Forde, BSc (Hons)
President, Medical Students' Association.
Medical Sciences Representative, Guild of Students 2023-2024, The University of the West Indies, Cave Hill Campus
Barbados.

THE UWI MISSION, VISION AND CORE VALUES

MISSION

To Advance Learning, Create Knowledge and Foster Innovation for the Positive Transformation of the Caribbean and the Wider World

VISION

An Excellent Global University Rooted in the Caribbean

CORE VALUES

The UWI is committed to the following core values:

Integrity
Excellence
Gender Justice
Diversity
Student Centeredness

Academic Calendar 2023-2024

Semester 1

Semester Begins	Sunday August 27, 2023
Teaching Begins	Monday September 04, 2023
Application for Leave of Absence	by Friday September 15, 2023
Change in Registration (Add/Drop)	by Friday September 15, 2023
Teaching Ends	Friday November 24, 2023
Review/Study Week	November 26 - December 1, 2022
Examinations Begin	Monday December 4, 2023
Examination Ends	Thursday December 21, 2023
Semester Ends	Thursday December 21, 2023

Semester 2

Semester Begins	Sunday January 21, 2024
Teaching Begins	Monday January 22, 2024
Application for Leave of Absence	by Friday February 02, 2024
Change in Registration (Add/Drop)	by Friday February 02, 2024
Teaching Ends	Friday April 05, 2024
Review/Study Week	April 08 – April 12, 2023
Examinations Begin	Monday April 15, 2024
Examination Ends	Friday May 04, 2024
Semester Ends	Friday May 04, 2024

Graduation

Cave Hill Graduation	Saturday October 21, 2023

Matriculation

Cave Hill Matriculation Ceremony	Friday September 01, 2023

Orientation

Undergraduate students	August 26 - September 01, 2023
FMS Undergraduate students	September 4 -15, 2023
Graduate students	August 29, 2023

Staff List 2023/20234

FACULTY ADMINISTRATION:

DEAN:
Damian Cohall, BSc, PhD (Pharmacology) (UWI)

HEAD – DEPARTMENT OF PRECLINICAL AND HEALTH SCIENCES:
Nkemcho Ojeh, BSc (Wales), MRes (Manchester) PhD (Lond)

HEAD – DEPARTMENT OF CLINICAL SCIENCES:
P. Michele Lashley, MBBS (hons) DCH (UWI), DM (Paeds) (UWI), FRCP(Edin), FRCPCH (UK)

DEPUTY DEAN (Research & Post Graduate Studies):
Michael Campbell, BA, MS, Ph.D., CPsychol, AFBPsS

DEPUTY DEAN (Recruitment and Outreach)
Kenneth Connell, MBBS DM (UWI), PhD (KCL), FACP, FRCP (Lond.)

DIRECTOR OF MEDICAL EDUCATION
Md. Anwarul Azim Majumder, MB BS, MHPEd (NSW), PhD (Dundee), PGD Health Economics (Dhaka)

COORDINATOR - PRECLINICAL AND BASIC SCIENCES:
Subir Gupta, BSc, MSc, PhD (Calc): Lecturer in Physiology

YEAR 5 COORDINATOR - CLINICAL
Maisha Emmanuel, MB BS (UWI), DM (Psych) (UWI), MSc. (Birm)

YEAR 4 COORDINATOR - CLINICAL
Keisha Thomas-Gibson MB BS, DM (Anaes & Intensive Care), Fellowship in Simulation: Lecturer (Anaesthesia)

PROGRAMME COORDINATOR - BACHELOR OF SCIENCES - HUMAN NUTRITION AND DIETETICS
Meshell Carrington BSc (Ryerson), MSc (McGill)

PROGRAMME COORDINATOR - BACELOR OF HEALTH SCIENCES

Roger Sealy, BSc., MB BS (UWI), MPH (Liverpool)

PROGRAMME COORDINATOR - BACELOR OF SCIENCE IN PRECLINICAL SCIENCES

Ibrahim Sulaiman, BSc, MSc (Nigeria) PhD (Malaysia)

COORDINATOR – PUBLIC HEALTH
Heather Harewood BSc, MB BS, MPH, DrPH (UWI)

COORDINATOR - NURSING

Wendy Sealy RN, BSc, MEd, PhD (UWI)

FACULTY SUPPORT SERVICES:

Office of the Dean
K. Suzanne Archer, BSc (Hons), Administrative Assistant

Cave Hill (Department of Preclinical and Health Sciences)

Pamela Alleyne, Administrative Assistant – Head of Department
Allan Thompson BSc, Stenographer Clerk
Lisa Chase, BSc, Stenographer Clerk
Donna Sisnett, BSc. (Hons), MSc., Stenographer Clerk
Tameshia Brandford, Stenographer Clerk
Kiana Hall, BSc., MSc., Medical Laboratory Technologist
Keisha Mascoll, BSc., MPhil, Medical Laboratory Technologist

Janneve Bell, AAS, Medical Laboratory Technician
Rondell Clarke, Office Assistant

Queen Elizabeth Hospital (Department of Clinical Sciences)

Judy Best, BSc. (Hons), Administrative Assistant - Head of Department
Janelle Mondesir BSc (Hons), Dip HR, Stenographer Clerk
DeShawn Earle-Best, Stenographer Clerk
Esther Harrison, Stenographer Clerk
Avonda Reid, APOM, Stenographer Clerk
Pamela Weekes, BA (Hons), Stenographer Clerk
Juann Ward, FMT, MPhil, Medical Laboratory Technologist
Zachary Callender, Registered Phlebotomy Technician (RPT)
Alan Barrow, BSc. (Hons), IT Support Technician
Brian Elcock, BSc, AV/IT Clinical Photographer
Kathy Holder, Office Assistant

Department of Preclinical and Health Sciences

Basic Medical Sciences

Damian Cohall, BSc (UWI), PhD Pharmacology (UWI): Senior Lecturer in Pharmacology
Rhaheem Layne-Yarde, BBMedSci (UWI): Temporary Assistant Lecturer in Pharmacology
Uma Gaur, MB BS (Delhi), MS Anatomy: Senior Lecturer in Anatomy
Nkemcho Ojeh, BSc (Wales), MRes (Manchester) PhD (Lond): Senior Lecturer in Biochemistry, Molecular Biology & Genetics
Ambadasu Bharatha BSc, MSc, PhD (India): Lecturer in Pharmacology
Kenneth Connell, MBBS DM (UWI), PhD (KCL), FACP, FRCP (Lond): Lecturer in Clinical Pharmacology
Subir Gupta, BSc, MSc, PhD (Calc): Lecturer in Physiology
Keerti Singh, MB BS, MSc: Lecturer in Anatomy
Ibrahim Sulaiman, BSc, MSc (Nigeria), PhD (Malaysia): Lecturer in Physiology

Health Sciences

Roger Sealy, BSc., MB BS (UWI), MPH (Liverpool): Temporary Lecturer & Coordinator, Bachelor of Health Sciences Programme

Human Nutrition and Dietetics

Meshell Carrington, BSc (Ryerson),MSc (McGill), RD: Temporary Lecturer & Coordinator, Human Nutrition and Dietetics Programme
Cheryl Rock BSc & MSc (AAMU), PhD (UF) : Part-Time Lecturer (Food Science)
Kerri-Ann Best, BSc (Suny-Plattsburgh), MScDiab (South Wales), RD: Part-Time Lecturer (Nutrition)
Sade Haynes, BSc (McGill), MSc (McGill), RD: Part-Time Lecturer (Nutrition)
Penelope Howell, BSc (Guyana) MSc (UWI): Part-Time Lecturer (Food Management Systems)

Public Health and Epidemiology

Heather Harewood BSc, MB BS, MPH, DrPH (UWI): Lecturer in Public Health
Natalie Greaves MB BS (UWI), PhD (Warwick): Lecturer in Public Health
Stephanie Whiteman, MPH UWI : Temporary Lecturer in Public Health
Walter Alleyne BSc, MB BS, MPH: Assoc. Lecturer (Public Health)
Heather Armstrong BSc, MB BS, MPH: Assoc. Lecturer (Public Health)
Elizabeth Ferdinand, MB BS, MPH: Assoc. Lecturer (Public Health)
Cheryl McCollin, MB BS, MPH: Assoc. Lecturer (Public Health)
Erwin Arthur Phillips, BSc, MB BS, MPH, MSc: Assoc. Lecturer (Public Health)
Steve Daniel, MSc: Part-time Lecturer (Public Health)
W. Austin Greaves: MPH, Part-time Lecturer (Public Health)
Selvi Jeyaseelan BSc, PhD: Part-time Lecturer (Public Health)

Nursing

Wendy Sealy RN, BSc, MEd, PhD (UWI): Lecturer in Nursing (Programme Co-ordinator)
Andrea Brathwaite, RN, BSc, MEd, (UWI), EdD (Sheffield) Part-time Lecturer
Marion Howard, RN, BA (UWI), MScN (Calif), PhD, (Calif) Part-time Lecturer

Denise Nicholls, RN, MSc (UWI) Part-time Lecturer
Deneice Marshall, BSc (Tenn State), Dbl MSc Part-time Lecturer
Larone Hyland, RN, BSc (UWI), MEd (Kent) Part-time Lecturer

Department of Clinical Sciences

Academic Staff by Area of Specialisation

Anaesthesia & Intensive Care

Keisha Thomas-Gibson, MB BS, DM (Anaes & Intensive Care), Fellowship in Simulation: Lecturer (Anaesthesia)
Curtis Alleyne, BSc (Hons), MB BS, DM (Anaes): Assoc. Lecturer (Anaesthesia)
Michael Fakoory, MB BS (UWI), DM (Anaes): Senior Assoc. Lecturer (Anaesthesia)
Philip Gaskin, MB BS, DM (Anaes & Intensive Care): Assoc. Lecturer (Anaesthesia)
Tamara Greaves, MB BS, DM (Anaes & Intensive Care): Assoc. Lecturer (Anaesthesia)
Kimberly Johnny; M.D; DM (Anaes & Intensive Care): Assoc. Lecturer (Anaesthesia)
Kumar Mahadevappa, MB BS, DA, MD: Assoc. Lecturer (Anaesthesia)
Sherry Lashley, MB BS, DM (Anaes & Intensive Care): Assoc. Lecturer (Anaesthesia)

Child Health

Alok Kumar, MB BS (India), DCH (India), MD (India): Professor of Paediatrics and Infectious Diseases
P. Michele Lashley, MB BS (UWI), DCH, DM (Paed) (UWI), FRCP (Edin), MRCPCH (Lond): Senior Lecturer in Child Health
M. Anne St John, MB BS (UWI), FRCPC, FAAP: Honorary Professor in Child Health
Madhumal Sajeev, MB BS, DCH, MRCP (Paed), MRCPCH: Assoc. Lecturer (Child Health)
Jennifer Campbell, MB BS (UWI), DCH, DM (UWI): Assoc. Lecturer (Child Health)
Clyde Cave, MB BS (UWI), DCH, FRCP (Can): Assoc. Lecturer (Child Health)
Dionne Grannum MBBS, DM (Paed) (UWI): Assoc. Lecturer (Child Health)
Angela Jennings, MB BS, DM (Paed) (UWI): Assoc. Lecturer (Child Health)
Ranita Jhagroo, MB BS, BcH, BAO, MRCPCH: Assoc. Lecturer (Child Health)
Kandamaran Krishnamurthy, MB BS, DM (Paed): Senior Assoc. Lecturer (Child Health)
Gayle Medford, MB BS, DCH, DM (Paed): Assoc. Lecturer (Child Health)
Julianne Steel-Duncan, MB BS, DM (Paed: Assoc. Lecturer (Child Health)
Gillian Birchwood, MB BS; Fellowship: Assoc. Lecturer (Child Health)

Emergency Medicine

Harold Watson, MB BS (UWI), MSc (Emer Med), DM (Emer Med) (UWI): Senior Associate Lecturer in Emergency Medicine
Reginald King, MB BS (UWI), MSc, DM (Emer Med) (UWI): Senior Lecturer in Emergency Medicine
Dr Lynn-Marie Lovell MBBS (UWI), DM (Emer Med) (UWI): Lecturer in Emergency Medicine
David Byer, MB BS, DM: Assoc. Lecturer (Emergency Medicine)
Anne-Marie Cruickshank, MB BS (UWI), MSc, DM (Emer Med) (UWI): Assoc. Lecturer (Emergency Medicine)
Rawle Springer, MB BS, DM (Emer Med) (UWI): Assoc. Lecturer (Emergency Medicine)
Chaynie Williams, MB BS, DM, MHA: Assoc. Lecturer in Emergency Medicine

Family Medicine

O. Peter Adams, BSc (Lond), MB BS, MSc, DM (Fam. Med) (UWI): Professor in Family Medicine
Euclid Morris, MB BS, MSc, MRCGP: Lecturer in Family Medicine
Joanne Paul-Charles MB BS, MSc, DM (Fam. Med), (UWI): Lecturer in Family Medicine
Colin Alert, MB BS, MSc, DM (Fam. Med), (UWI): Part-time Lecturer Associate Lecturer (Family Medicine)
Sonita Alexander, MB BS, MSc, DM (Fam. Med) (UWI): Temporary Lecturer in Family Medicine
Adrian Lorde, MB BS MSc. (UWI) (Fam Med): Assoc. Lecturer (Family Medicine)

Medicine and Medical Sub-Specialities

Colette George, MB BS (UWI), MRCP (UK): Lecturer in Internal Medicine
Arianne Harvey, MB BS, ABIM: Lecturer in Internal Medicine
David Corbin, BA, MB BChir Camb, MRCP (UK): Honorary Professor in Neurology
Rudolph Delice, MB BS, DM Medicine (UWI), FACP: Senior Assoc. Lecturer in Internal Medicine
Cindy Flower, MB BS, DM (UWI): Senior Assoc. Lecturer (Rheumatology)
Sean Marquez, MB BS (UWI), FRCP (Can): Senior Assoc. Lecturer (Neurology)

Dawn Scantlebury, MB BS, DM (UWI): Senior Assoc. Lecturer (Cardiology)
Dawn Alleyne, MB BS (UWI), FCCP: Assoc. Lecturer (Medicine)
Lisa Belle, MB BS DM (Internal Medicine): Assoc. Lecturer (Medicine)
Suleman Bhamjee, MB BS (UWI), Dip Derm: Assoc. Lecturer (Dermatology)
Wayne Clarke, BSc, MB BS (UWI) DM (Internal Med): Assoc. Lecturer (Medicine)
Andrew Forde, (M) BSc, MB BS (UWI), Dip Derm (Lond), SAAD: Assoc. Lecturer (Dermatology)
Corey Forde, MB BS, DM: Assoc. Lecturer (Infectious Diseases)
Graham Griffith, MB BS (UWI), DM (Internal Med) (UWI): Assoc. Lecturer (Medicine)
Anne-Marie Hassell, MB BS, MDCM: Assoc. Lecturer (Medicine)
Richard Ishmael, MB BS (UWI), FAAP, FACC, FRCP (Can), FCCP: Assoc. Lecturer (Cardiology)
Michael Krimholtz, MB BS, MRCP, MSc., MD: Assoc. Lecturer (Medicine)
Stephen Moe, MB BS (UWI), Dip (Internal Med), Dip: Assoc. Lecturer (Cardiology)
Harley S L Moseley, MB BS, Cert. Physical Medicine and Rehabilitation: Assoc. Lecturer (Rehab Medicine)
Ambrose Ramsay, BSc. (Hons) MB BS, Dip. Gerontology: Assoc. Lecturer (Geriatrics)

Obstetrics & Gynaecology

Garth McIntyre MB BS FRCOG: Lecturer in Obstetrics and Gynaecology
Damian Best, MB BS, DM (UWI), MSc (by research) (Aberd), MRCOG: Lecturer in Obstetrics and Gynaecology
Carlos Chase, MB BS, DGO, CLM DM (UWI): Assoc. Lecturer (Obstetrics and Gynaecology)
Vikash Chatrani, MB BS, DM (OBGYN), FACOG, FICS: Assoc. Lecturer (Obstetrics and Gynaecology)
Kamara Odle-Cummins, MB BS, DM (OBGYN) Assoc. Lecturer (Obstetrics and Gynaecology)
NaTisha Robinson, MB BS, MRCOG, Fellowship Maternal & Fetal Medicine: Assoc. Lecturer (Obstetrics and Gynaecology) Gynaecology)
Hugh Thomas, MB BS (UWI), MRCOG: Assoc. Lecturer (Obstetrics and Gynaecology)
Wayne Welch, MB BS (UWI), MRCOG: Assoc. Lecturer (Obstetrics and Gynaecology)

Pathology, Microbiology & Haematology

Cheryl Alexis, MB BS (UWI), Dip (Child Health), MSc (Haematology, UK), MRCP (UK): Senior Lecturer in Haematology
Alain Reid, MBBS, DM (Path): Temporary Lecturer in Pathology
Marquita Gittens-St. Hilaire, BSc, PhD: Senior Lecturer in Microbiology
Desiree, Skeete, MB BS, DM (Path): Lecturer in Anatomical Pathology
Theresa Laurent, BSc (Hons), MB BS, DM (Haem): Assoc. Lecturer (Haematology)
Delores Lewis, BSc, MSc (Micro) MB BS (UWI): Assoc. Lecturer (Microbiology)
Elliot Douglin, BSc (Leeds), MBBS (UWI): Part-time Lecturer (Chemical Pathology)

Psychiatry & Psychology

Maisha Emmanuel, MB BS (UWI), DM (Psych) (UWI), MSc. (Birm): Senior Lecturer in Psychiatry
Michael Campbell, BA, MS, Ph.D., CPsychol, AFBPsS: Senior Lecturer in Behavioural Science/Psychology
Joanne Brathwaite MB BS (UWI), DM (Psych), MPH (Liverpool): Assoc. Lecturer (Psychiatry)
Sharon Harvey, MB BS (UWI), MRCPsych: Assoc. Lecturer (Psychiatry)
June Price Humphrey MBBS, DM (Psychiatry): Assoc. Lecturer (Psychiatry)
Cherianne Catwell MBBS, DM (Psychiatry): Assoc. Lecturer (Psychiatry)

Public Health & Epidemiology

Full-Time Lecturers

Heather Harewood BSc, MB BS, MPH, DrPH (UWI): Lecturer in Public Health
Natalie Greaves MB BS (UWI), PhD (Warwick): Lecturer in Public Health
Waneisha Jones, MB BS, MPH *UWI*: Lecturer in Public Health
Walter Alleyne BSc, MB BS, MPH: Assoc. Lecturer (Public Health)
Heather Armstrong BSc, MB BS, MPH: Assoc. Lecturer (Public Health)
Elizabeth Ferdinand, MB BS, MPH: Assoc. Lecturer (Public Health)
Cheryl McCollin, MB BS, MPH: Assoc. Lecturer (Public Health)
Erwin Arthur Phillips, BSc, MB BS, MPH, MSc: Assoc. Lecturer (Public Health)
Steve Daniel, MSc: Part-time Lecturer (Public Health)
W. Austin Greaves: MPH, Part-time Lecturer (Public Health)
Selvi Jeyaseelan BSc, PhD: Part-time Lecturer (Public Health)

Radiology & Radiotherapy

Peter Jolly, MB BS (UWI), DM (Rad) (UWI), FRCR: Assoc. Lecturer (Radiology)
Radhakanth Shenoy, MB BS, DMRT, DM: Assoc. Lecturer (Radiotherapy)
Graeme Thomas, MB BS, DM Rad) (UWI): Assoc. Lecturer (Radiology)

Surgery & Surgical Sub-Specialties

Dawn Grosvenor, MB BS (UWI), MRCOphth, FRCS (Glasg), FRCOphth: Lecturer in Ophthalmology
Tamara Nancoo, MA (Cantab), MBBChir, PGDip (SEM), FRCS (Tr&Orth): Lecturer in Orthopaedics
Margaret O'Shea, MB BS, DM (Gen Surg) (UWI), FCCS: Lecturer in General Surgery
Alan Smith, MB BS (UWI), DM (Cardiothoracic), FCCS: Lecturer in Cardiothoracic Surgery
Dale Springer, MB BS, DM (Gen Surg) (UWI), FCCS: Temporary Lecturer in General Surgery
David Callender, MB BS, FRCOphth: Assoc. Lecturer (Ophthalmology)
Randy Carrington BSc (Hons), MB BS, FRCS (Edin), FRCS: Assoc. Lecturer (Orthopaedics)
Ayana Crichlow, MB BS, DM (Orthopaedic Surgery)
Trevor Drakes, (Ophthalmology)
Selwyn Ferdinand, MB BS (UWI), FRCS (Edin), FCCS: Senior Assoc. Lecturer (Surgery)
Roy Forde, (Otolargngology (ENT), MB BS (Hons), DM, (ORL)
Philip Griffith, MB BS, DM (Surg), Cert. Minimally Invasive and Bariatric Surgery: Assoc. Lecturer (Surgery)
Anthony Harris, MB BS (UWI), FRCS (Edin): Assoc. Lecture (Surgery)
Jerome Jones, MD: Assoc. Lecturer (Orthopaedics)
Mohammed Kazi, BSc, MB BS (UWI), FRCS: Assoc. Lecturer (Ophthalmology)
Vijay Kumar, MB BS, MS General Surgery, FCCS, AUA: Assoc. Lecturer (Urology)
Natalie Roberts, MB BS, M.Sc., M.F.S.E.M.: Assoc. Lecturer (Orthopaedics)
Gita Sajeev, MB BS, Dip. (Ophth), MRCOphth, FRCS: Assoc. Lecturer (Ophthalmology)
Roger Thomas, MB BS (UWI), FRCOphth: Assoc. Lecturer (Ophthalmology)
Michelle Vincent, MB BS, MRCS, DM (Paed Surg): Assoc. Lecturer (Paediatric Surgery)
Judy Ward, MB BS FRCSC: Assoc. Lecturer (Plastic Surgery)
Christopher Warner, MB BS (UWI), FRCS (Edin), FCCS: Assoc. Lecturer (Surgery
Ramesh Jonnalagadda MBBS, MS Madr, FAIS, FCCS, FRCS: Senior Assoc. Lecturer (Surgery)
Ayanda Crichlow, MB BS (UWI), DM Orthopaedic Surgery: Assoc. Lecturer (Surgery)
Kirk Miller, BSC (Hons), MBBS, FRCS: Assoc. Lecturer (Ophthalmology)

National Health Research

Pamela Gaskin, BSc, PhD: Lecturer in Essential National Health Research

Professors Emeriti

Sir Henry Fraser, BSc (Lond.), MB BS (UWI), PhD (Lond.), FACP, FRCP: Emeritus Professor of Medicine and Clinical Pharmacology

Sir Errol Walrond, BSc (Lond.), MB BS, LRCP, FRCS, FACS, FCCOS: Emeritus Professor of Surgery

The George Alleyne Chronic Disease Research Centre (GA-CDRC)

Simon Anderson, MRCP, MBBCh. Cardiff, MSc Oxon, Mphil Cantab, PhD UWI: Professor of Public Health, Director
Ian Hambleton, BA (Brunel), MSc (Reading), PhD (Soton): Director of Graduate Studies, Professor of Biostatistics
Christina Howitt, BSc (Bristol), MSc (LSHTM), PhD (UWI): Lecturer in Data Science
Madhuvanti Murphy BSc, MPH, DrPH: Senior Lecturer in Qualitative Research Methods
Natasha Sobers BS, MPH, PhD: Senior Lecturer in Epidemiology
Kim Quimby, MB BS (UWI), MSc (Lond), PhD (UWI): Senior Lecturer in Immunology
Tanya Martelly, BSc (UBC), MPH (UWI): Research Manager

THE UNIVERSITY OF THE WEST INDIES

Visitor

The Hon Mr Justice Fitzherbert Rolston Nelson
Retired JCCJ, MA *Oxon;* LLM *Lond*

PRINCIPAL OFFICERS OF THE UNIVERSITY

Chancellor

Mr Robert Bermudez

Vice-Chancellor

Professor Sir Hilary Beckles, KA, BA, PhD *Hull,* Hon DLitt, *Hull,* Hon DLitt *Glasgow,* Hon DLitt *KNUTS*, Hon DHL *University of the Virgin Islands*

Chairpersons, Campus Councils

Sir Paul Bernard Altman, GCM, BCH, JP, BBA Mia, Hon. LLD *UWI* - **Cave Hill**
Aziz Fares Hadeed, CBE – **Five Islands**
Mr Earl Jarrett, CD, Hon. LLD *UWI*, JP, FCA, MSc *UWI* - **Mona**
Her Excellency Dr June Soomer, BA, PhD *UWI* - **Open Campus**
Ms Sharon Christopher, LLB *UWI,* LLM *Lond*, LEC, Acc. Dir - **St Augustine**

Pro Vice-Chancellors

R. Clive Landis, BSc *Birmingham*, MSc, PhD *Loyola*
Densil Williams, BSc *UWI*, MSc *UWI*, PhD *Manc*
Derek Chadee*, BSc, PhD UWI*
Francis Severin, BSc MSc, PhD, *UWI*
Aldrie Henry-Lee, BA, MSc, PhD *UWI*
Rose-Marie Belle Antoine, LLB *UWI,* LLM *Cambridge*, DPhil *Oxon*
C. Justin Robinson, BSc *UWI*, MSc *FIU*, PhD *Manc*
Aldrie Henry-Lee, BA, MSc, PhD *UWI*
Sandrea Maynard, LLB (Hons), LLM, SFHEA, PgCHE

Campus Principals

R. Clive Landis, BSc *Birmingham*, MSc, PhD *Loyola* - **Cave Hill**
Densil Williams, BSc *UWI*, MSc *UWI*, PhD *Manc* – **Mona**
Francis Severin, BSc, MSc, PhD, *UWI*- **Global Campus**
Rose-Marie Belle Antoine, *LLB UWI, LLM Cambridge*, DPhil *Oxon* – ***St Augustine***
Justin Robinson, BSc *UWI,* MSc FIU, PhD *Manc* - **Five Islands**

Deputy Campus Principals

Winston Moore, BSc *UWI*, MSc *Warwick UK*, PhD *Surrey UK*- **Cave Hill**
Tomlin Paul, MBBS, MPH *UWI,* DFPHM *UK*, FAcadMEd *UK* - **Mona**
Emily Dick-Forde, BSc UWI, MPhil Cantab, FCPA FCMA, PhD *Dundee* - **Open Campus**
Indar Ramnarine, BSc *UWI*, MSc *Wales*, PhD *UWI*, MBA *Heriot-Watt* - **St Augustine**

University Registrar

Maurice Smith, JP CPF Ed, Teach Dip *Mico,* BSc *NCU,* MSc *NSU,* EdD *Howard*

University Bursar

Andrea McNish, BSc, MSc *UWI*, FCCA

University Librarian

Karen Lequay, BSc *UWI*, MSc Southampton, MSc Loughborough

Public Orators

Kenneth Connell, MBBS DM *UWI.* PhD (KCL), FACP, FRCP (*Lond.*), FACC - **Cave Hill**
Andrea Veirs, BS, Dip.Ed *UWI*, MA *Derby* – **Five Islands**
Livingston White, BA *UWI*, MSc PhD *FSU* - **Mona**
Veronica Simon, BA, DipEd, MPhil *UWI,* PhD *Sheffield* - **Open Campus**
Elizabeth Walcott-Hackshaw, BA, MA, PhD *Boston*- **St Augustine**

FOREIGN LANGUAGE POLICY FOR ALL PROGRAMMES

As of academic year **2022-2023**, all undergraduate students who have passed a CSEC/CXC or CAPE Foreign Language or have deemed to satisfy the foreign language requirement of The University of the West Indies will be exempted (without credits) from taking a foreign language course.

Students who are not exempted from the foreign language course will be required to complete a foreign language course of 3 credits. A student may be allowed to substitute one of the non-language Foundation Courses (i.e., FOUN1101 or FOUN1301) with a foreign language course.

REGULATIONS FOR MBBS DEGREE PROGRAMME

1. ENTRY REQUIREMENTS

Age Requirements
Applicants must be at least 18 years old on December 30 of the year of entry to the programme.

Admissions

a) Applicants must submit their applications to the Campus registrar, The University of the West Indies, Cave Hill Campus by the end of the second week of January of each year. For procedures concerning applications and for further information candidates should write to the Assistant Registrar, Admissions.

b) Applicants required to withdraw from the Faculty for failing to complete the MBBS Degree Programme within the stipulated time or because of poor performances may be considered for readmission to the MBBS Degree Programme after at least one year has elapsed since their withdrawal.

c) Applicants for admission to this programme must satisfy both the general matriculation requirements of the University and the specific requirements of the Faculty of Medical Sciences for entry to the MBBS.

General Entry Requirements

Note that entry to the MBBS Programme is highly competitive and being qualified is not a guarantee of acceptance.

- Minimum of five (5) CSEC CXC subjects (general proficiency grade I-III (from 1998)) and/or GCE 'O' Levels (grades A-C) including English Language, Mathematics, Biology, Chemistry and Physics.

- Passes in two two-units of Biology/Zoology, Chemistry and one other two-unit CAPE or A' Level subject.

The following scheme is now required for entry.

Scheme	(CAPE)/GCE 'A' Level passes	Must include these subject(s) among the five (5) CXC/GCE 'O' Level passes required for matriculation
A	Chemistry, Biology/ Zoology and either Physics or Maths	
B	Biology/Zoology, Chemistry and a non-science subject	Physics

Applications to enter the MBBS will also be considered in the following categories:

Transfers from UWI

- Transfer applicants to the MBBS from the Faculties of Pure and Applied Sciences of the UWI may only be considered on completion of the First Year/ Phase 1 of the Programme.

- All such applicants must complete and submit a Transfer Form (only) by the second Friday in January in the year of application.

- Qualification foe entry will be based on performance in Chemistry, Biology and one other subject. If the third subject is not Physics, Physics must have been passed at the CSEC level. A minimum GPA of 3.5 with a minimum Grade of B in Chemistry, Biology and one other subject is required

Applicants Holding UWI Science Degrees
Persons holding UWI first degrees from the Faculties of Pure and Applied Sciences in the relevant subjects (see above) and with minimum of lower second-class honours may be considered for entry.

Applicants holding Degrees from other Universities
Persons holding degrees from Universities other than the UWI will also be considered provided that:

- The University which granted the degree is recognized by the UWI as competitive.
- Credits have been obtained in Biology/Zoology and Chemistry.
- A minimum cumulative Grade Point Average of 3.0 or its equivalent has been obtained.

Associate Degrees
Applicants holding a triple major associate Degree in the appropriate subjects, from an approved Community College, provided that a cumulative GPA of 3.5 or greater has been attained will be considered for entry to the MBBS programme.

Equivalent qualifications to the above
Applications may also be considered from persons holding other qualifications which are deemed by the Faculty to be equivalent to the categories above as determined from official transcripts.

2. NON–ACADEMIC CONSIDERATIONS

2.1 All applicants are required to submit a short 250-300-word autobiographical summary outlining the reasons for their career choice. An applicant's chances of entry will be enhanced by documented and certified involvement in extracurricular activities in the years prior to his/her application.

2.2 Candidates must also produce evidence of their involvement in relevant extra-curricular/co-curricular activities, socially-oriented projects and voluntary community service in the year prior to their application.
In addition to academic ability, the faculty is seeking rounded individuals with a range of abilities and interests. Such must be readily definable and subject to proof. They include, but are not limited to, leadership qualities, social awareness and excellence in sport, language or the arts.

2.3 All applicants are required to submit original documents with certified evidence of their abilities or involvement in such activities in support of their applications.

2.4 Documents must be signed and stamped by an appropriate person (school official, employer, supervisor, etc.) and, to be considered, must state both the duration of involvement in the activity and the level of involvement or achievement attained.

2.5 Any information in such submissions, if found to be falsified, will result in withdrawal of the offer of entry and may constitute grounds for dismissal.

2.6 In general, sustained involvement in one or two activities over time is favoured over recent activity in many areas.

Fitness to Practise
Becoming a doctor means more than acquiring knowledge and skills. Medical students cannot complete the undergraduate curriculum without coming into close and sometimes intimate contact with members of the public who may be vulnerable or distressed. It is essential that you do nothing to diminish the trust which sick people and their relatives place in you. The award of a medical degree entitles you to be provisionally registered and to practise under supervision as a doctor. The award of a medical degree by the University thus confirms that you are fit to practise to the high standards laid down by the profession.

Universities have a duty to ensure that no member of the public is harmed as a consequence of participating in the training of their medical students and that your conduct as a medical student maintains the high standards of honesty and behaviour that the public has a right to expect from the medical profession.

3. REGISTRATION

Registration for courses takes place during the first week of each semester of the academic year.

The registration of a student is not complete until the appropriate tuition and other fees have been paid in respect of that student or arrangements acceptable to the Campus Bursar have been made with respect to the payment of such fees.

4. PROGRAMME OF STUDY

4.1 The programme for the MBBS Degree lasts not less than ten (10) semesters: Phase I (3 years/6 semesters and Phase II (2 years/4 semesters).

4.2 Both phases consist of courses or clerkships in which are included lectures, conferences, seminars, tutorials, self-study, use of learning aids (including information technology), practicals and demonstrations including clinical bedside teaching. Outlines of these are provided in the Student Handbook.

4.3 The candidate's progress in each course or clerkship is assessed on the basis of his or her performance in a combination of in-course assignments and projects, and written, practical, clinical and oral examinations, as outlined in the Student Handbook.

4.4 Phase I consist of an integrated series of courses spanning the first three years leading to comprehensive, multidisciplinary examination. Successful candidates will be awarded the Bachelor of Medical Sciences Degree (BMedSci).

4.5 Phase II comprises the final two years and is made up of a series of clinical attachments followed by the final MBBS examination. The degree is awarded at pass level or with honours or distinction on the satisfactory completion of the programme.

5 EXEMPTIONS

5.1 A student who has completed a course and passed an examination from this or another recognised university in a subject which forms a part or the whole of an analogous subject in the MBBS Degree programme may apply to the Academic Board, through the Dean, for exemption. The Academic Board shall make a decision on the matter after considering the recommendation of the Faculty Board which shall take into account the syllabus, the nature and duration of the course, the person's grading in examinations in the course, the time which has elapsed since the course was completed and, in particular, whether it is analogous in whole or in part to that offered in this University.

5.2 The Faculty Board shall make one of the following recommendations to the Academic Board, indicating the reason for such recommendation:

a) that the application be rejected; or
b) that the person be exempted from a part or the whole of the subject; but be required to take a part of or the full examination; or
c) that the person be exempted both from the course and the examination

5.3 Exemptions will not be granted to persons who have been asked to withdraw and/or re-admitted to the Faculty for whatever reason.

5.4 Persons entering the programme with a Bachelor of Basic Medical Sciences Degree from the UWI may be granted exemptions of a maximum of the first two years of the programme depending upon the time which has elapsed between the completion of that Degree and the date of application to enter the MBBS Degree Programme.

5.5 Applications for exemptions will not normally be considered in respect of persons who obtained the Bachelor of Basic Medical Sciences Degree more than two years prior to the date of application to enter the programme.

6 EXAMINATIONS – GENERAL

6.1 Registration in both phases takes place during the first week of each semester of each academic year. Registration for examinations consists of registration for the appropriate course(s) for that phase.

6.2 A candidate must attempt at the same sitting all Sections of the Examinations for which he or she has been registered.

6.3 A candidate must attend all the written, practical, clinical and oral sections of the Examinations for which he or she has registered, and that are applicable in his or her case.

6.4 A candidate who fails to attend any written, practical, clinical or oral section of any Examination for which he or she has registered and that is applicable in his or her case shall be recorded as having failed the Examination.

6.5 A candidate who fails any section of the written, practical, clinical or oral Examinations on his or her first attempt shall be required to re-sit the Examination at the next available opportunity, unless otherwise decided by the Academic Board, Cave Hill, on the recommendation of the Board of

Examiners and the Faculty Board. *Note that failure of the second attempt results in a repeat of the course/clerkship.*

6.6 A candidate who applies to re-sit an Examination must attempt all sections of the Examination at the same sitting.

6.7 A candidate who fails the Phase I or Phase II Examinations on his or her third attempt shall be required by the Academic Board, Cave Hill Campus, to withdraw from the MBBS Degree Programme. However, should the candidate's performance be deemed unsatisfactory due to adverse conditions, the Academic Board on the recommendation of the Faculty Board, may support another attempt and, if warranted, grant an extension of time in which the Examination is to be completed. In considering whether to recommend an extension of time, the Faculty Board shall take account of the requirement that the time between the completion of the course and the examination must not exceed nineteen months.

6.8 A candidate may be awarded a Pass with honours or distinction in Phase I or Phase II Examinations, depending on the standard that he or she has reached, and provided that it is his or her first attempt at the examination.

7. GRADING SCHEME

Grading Scheme for BMedSci degree.

The grading scheme shown in table below will apply to the BMedSci programme.

Letter Grade	Numeric Score	GPA
A+	90-100	4.3
A	80-89	4.0
A-	75-79	3.7
B+	70-74	3.3
B	65-69	3.0
B-	60-64	2.7
C+	55-59	2.3
C	50-54	2.0
*FWR	<50	0.0
*FWR = Fail With Repeat		

Categories of Degree:

Category of Degree	Description	Grade Average Point
Honours Degree with Distinction	Demonstrates an outstanding and comprehensive grasp of the knowledge, skills and competencies required.	3.70 and above
Honours Degree	Demonstrates an excellent grasp of the knowledge, skills and competencies required	3.30 – 3.69
Pass	Demonstrates a satisfactory grasp of the knowledge, skills and competencies required	2.0 -3.29

8. UNSATISFACTORY PERFORMANCE

8.1 In the MBBS Degree Programme, a candidate's performance is considered unsatisfactory if he or she displays poor academic attendance, performance, or unprofessional behaviour.

8.2 A candidate's academic performance is poor if he/she has failed any form of assessment, examination or on-going evaluation in any defined course, module, clerkship or learning unit which forms a part of the MBBS Degree Programme.

8.3 A candidate's behaviour is unprofessional if he/she displays inappropriate, unethical or unprofessional behaviour in his/her interpersonal contacts especially in relation to patients or their families, colleagues, or members of the University or Hospital staff.

8.4 Where unsatisfactory performance is serious or is, for any other reason, considered to be a cause for concern, the matter should be reported in writing to the Dean and copied to the candidate.

8.5 The candidate will be given an appointment to be interviewed by the Dean or the Dean's nominee who (except where regulation 8.8 applies) will arrange for appropriate remedial

action to assist the candidate, followed by re-evaluation.

8.6 A candidate who fails to attend the interview or to participate in the remedial measure or the re-evaluation may be barred by the Academic Board, on the recommendation of the Faculty Board, from continuing in the programme.

8.7 The Faculty Board shall consider a written report on the result of the remedial action and shall make recommendation to the Academic Board as to whether or not the candidate may proceed to the next phase of the programme at that time.

8.8 Where poor academic performance is repetitive or where unprofessional misconduct is serious; the Dean shall convene a Committee to examine the case and to provide a report to the Faculty Board. The Committee shall include staff members from at least three different Departments. The candidate concerned shall be given an opportunity to be heard and may be accompanied by a member of the student body selected by the candidate.

8.9 The Faculty Board shall consider the report of the committee and may make determination that no further action is required or may submit the matter to the Academic Board for its decision, with a recommendation as to the measures to be taken.

Such measures may include:

- the institution of further remedial measures (which may include professional counselling),
- leave of absence for a period of up to one year,
- withdrawal from the MBBS programme.

8.10 The decision of the Academic Board or the Faculty Board, as the case may be, will be conveyed to the candidate in writing and the candidate will have the right to appeal the decision by application to the Board for Undergraduate Studies.

9. PHASE I COURSES

9.1 Phase I courses extend over the first three years leading to Phase I Examinations for the BMedSci Degree. It comprises a series of courses (as set out in the Student Handbook) which integrate the disciplines of Human Anatomy, Biochemistry Physiology, Community Medicine, Pathology, Microbiology and Pharmacology and includes early exposure to patients and basic clinical skills.

9.2 Continuous assessment of a candidate's performance in courses throughout these three years normally contributes 40-60% of the final mark for Phase I (BMedSci).

9.3 In addition, the candidate is required to follow and complete the following University Foundation Courses:

- FOUN1001 English for Academic Purposes (3 credits)
- FOUN1301 Law, Governance, Economy and Society (3 credits)
- FOUN1101 Caribbean Civilisation (3 credits)

9.4 The candidate must complete the required Foundation Courses before commencing Phase II. *The Award of the BMedSci and* the MB BS degrees require satisfactory completion of the medical programme, including the requisite nine credits for the Foundation Courses. *Please note that the Award of the BMedSci degree is not automatic. Students who have fulfilled the requirements for BMedSci and are not pursuing the MBBS degree will be required to apply to the University for the degree.*

10. PHASE I EXAMINATIONS (BMedSci)

10.1 With the exceptions noted in Section 5 (Exemption), all candidates will be required to pursue and complete the prescribed courses of study in a satisfactory manner for the award of the BMedSci.

10.2 Phase I end of course Examinations will be held at the completion of the respective courses with repeat examinations normally held within seven months.

10.3 A candidate who does not achieve a passing grade for a Phase I course after completion of the written examinations will normally be required to sit the repeat examination within seven months.

10.4 A candidate who fails a Phase I examination on his/her second attempt will be required to follow a prescribed remedial course of study and to sit the examination at the next available opportunity. No further attempt will be allowed unless the Academic Board otherwise decides under section 6.7.

10.5 Successful completion of the Phase I Examinations must be achieved within twelve months of completion of the Phase I courses of study. The Academic Board, on the recommendation of the Faculty Board, may require a candidate who fails to complete the Examinations within that time to withdraw from the programme, except in a case where the Academic board, under section 6.7, has approved a fourth attempt at the Examinations and extended the period for completion of Phase I Examinations.

10.6 Candidates will be notified of the results of the Examinations as soon as possible, subject to ratification by the Board for Undergraduate Studies. Passes in Phase I (BMedSci) will be awarded at Pass, Honours or Honours with Distinction levels depending upon the overall standard attained in both continuous assessment and the final examinations.

10.7 Candidates must satisfy the examiners in the continuous assessment of the Phase I programme and pass all of the Phase I examinations in order to proceed to Phase II.

11. PHASE II COURSES

11.1 The requirement for entry to Phase II is the completion of Phase I by following the prescribed courses of study and by passing the examinations unless exemptions (Section 5) apply.

11.2 Phase II spans at least 24 months and includes courses of study/clerkships in the following subjects: Anaesthetics; Child Health; Community Health; Emergency Medicine; Internal Medicine (including Dermatology and Venereology); Microbiology; Obstetrics and Gynaecology; Pathology; Psychiatry; Radiology; and Surgery (including Ophthalmology, Emergency Medicine, Orthopaedics, and Otorhinolaryngology). There is also an elective period.

11.3 A candidate who has done any course of study/clerkship in an unsatisfactory manner will be required to repeat it before proceeding. Repetition of any part of the course may necessitate delay in completion of the programme.

11.4 A candidate who does not achieve a passing grade for a Phase II course after completion of the written and/or clinical examinations will normally be required to sit the repeat examination at the next sitting.

11.5 A candidate who fails a Phase II examination on his/her second attempt will be required to repeat the entire clerkship and to sit the examination at the next available opportunity. No further attempt will be allowed unless the Academic Board otherwise decides under section 6.7.

12. PHASE II FINAL EXAMINATIONS

12.1 The procedures for entering these examinations are the same as for the Phase I Examinations (see Section 10)

12.2 In order to be permitted to take the examination, candidates must have satisfactorily completed all required clerkships in Phase II.

12.3 For each discipline the examination consists of both written and clinical/oral components.

12.4 The written component will normally contribute 50% towards the total mark of the examination.

12.5 Clinical competence will be assessed by means of clinical examination(s) which will normally contribute 50% towards the mark of the examination.

12.6 Candidates must pass both the written and clinical component(s) of the examination in order to pass the overall examination.

12.7 Candidates who fail the clinical component and/or the overall examination will be required to re-sit within seven months those components which they have failed.

12.8 A candidate who fails a Phase II examination will be required to follow a prescribed remedial course of study and to sit the examination at the next available opportunity. No further

attempts will be allowed unless the Academic Board otherwise decides under Section 6.7.

12.9 The Academic Board, on the recommendation of the Faculty, may require a candidate who has not successfully completed the examination within a twelve-month period to withdraw for failure to progress. The foregoing provision shall not apply in a case where the Academic Board has allowed subsequent attempts at the examination under section 6.7 and has extended the time for completion, in accordance with that section.

12.10 Candidates will be notified of the result of each part of the Phase II Examinations as soon as possible, subject to ratification by the Board for Undergraduate Studies.

12.11 The MBBS Degree will be awarded at Pass, Honours or Honours with Distinction, depending on the standard reached in examination and in the continuous assessment. At the discretion of the Examiners, candidates who are being considered for honours/distinctions or who have obtained borderline failing grades may be invited to attend on oral examination, after which a final grade will be awarded.

12.12 A candidate is eligible for the award of the MBBS Degree following satisfactory completion of the programme, and the University Foundation Courses.

12.13 A candidate will not be awarded an Honours or Distinction degree unless he or she passes all of the Phase I and Phase II examinations at the first attempt.

As May/June 2024, The Final MBBS Exam will take a new format of a Unified Examination. The exam will comprise of a written paper and an Objective Skills Clinical Exam (OSCE) component. Exams codes will be implemented in due course.

13. AWARD OF THE MBBS DEGREE

13.1 After the Board for undergraduate Studies has approved the pass list, the Degree of Bachelor of Medicine and Bachelor of Surgery shall be awarded to each successful candidate.

13.2 The class of BMed Sci degree shall be awarded as follows:

- Honours Degree with Distinction Weighted GPA of 3.7 and above
- Honours Degree Weighted GPA of 3.3 -3.6
- Pass

Note that degrees at the level of Honours or Distinction will normally be awarded only to those students who have passed all required courses/clerkships ***at their first attempt.***

RULES GOVERNING GPA SYSTEM

1. The general conversion scheme adopted by the University for assigning quality points will be adopted and applied to define letter grades for all core courses with the exceptions noted in (5, 9 and 10) below.

2. The award of the MBBS Degree requires that students complete (and pass) all specified core courses and clerkships except where an exemption has been granted (see regulations governing exemptions).

3. The lowest passing letter grade to be applied to a course is a C which will constitute a pass.

4. The cut point for awarding a C in any course will be determined by a process of standard-setting employing multiple examiners.

5. Students who fail to achieve a passing grade in a course/clerkship will be assigned an FWR (Fail with Repeat), which does not affect the GPA. This grade will be recorded permanently on their transcripts.

6. The letter grades C-, D+ and D will not be used or assigned to students' results.

7. Students assigned an FWR (Fail with Repeat) will be required to pass the failed course/clerkship at a subsequent attempt.

8. Students will normally be allowed a maximum of two further attempts at any failed course. After the second attempt at examinations, students will be required to repeat the entire course.

9. Students unable to pass a failed course in three (3) attempts will be given the grade F (0.00 quality points) for the third

attempt and will normally be required to withdraw.

10. Whenever a course is passed following a failed first attempt, the maximum grade that can be assigned will be a C.

11. Although the FWR grade will remain on the student's record, the GPA for the student passing a course following a failed attempt will be recalculated using the passing grade of C.

Phase I

- Students in years 1 and 2 will be permitted to proceed into the subsequent year only if the credit value of failed courses in the preceding year does not exceed a total of 6 credits.
- Students who proceed into subsequent years carrying failed courses will be required to register for and sit them at the next available opportunity.
- Students who fail to pass a course after a total of three attempts will normally be required to withdraw.
- Students will not be permitted to proceed into Phase II of the programme unless and until all required Phase I Courses have been passed.

Phase II

- Students in Year 4 will be permitted to proceed into the 5th and final year only if the credit value of clerkships failed does not exceed a total of 6 credits.
- Students who proceed into year 5 carrying failed clerkships will be required to register for and sit them at the next available opportunity.
- Students who have proceed to 5th year and fail a 4th year clerkship twice will be required to repeat and pass that clerkship before continuing in 5th year.
- Students who fail to pass a clerkship after a total of three attempts will normally be required to withdraw.
- Students must complete and pass all courses/clerkships in Phase 2 and pass all parts of the final MBBS examination to be eligible for the award of the MBBS Degree.

14. AWARDS OF THE MB BS DEGREE

14.1 The final degree GPA includes all core MBBS courses/clerkships, from Years 1 to 5, except pass/fail courses. Grades for foundation courses and other non-MBBS courses are not included in the degree GPA.

14.2 The marks/grades from the final Phase II examinations will not be used in the calculation of the GPA. These examinations will be considered as 'fitness for practise' examinations and must be passed to meet the requirements and to be eligible for the award of the MBBS degree.

14.3 The class of degree awarded will be based on the final degree GPA.

14.4 Degree at the level of Honours or Distinction may only be awarded to students who have passed all required courses/clerkships and all parts of the final examination at their first attempt.

The grading scheme shown in table below will apply to the MBBS programme.

Letter Grade	Numeric Score	QPs
A+	90-100	4.3
A	80-89	4.0
A-	75-79	3.7
B+	70-74	3.3
B	65-69	3.0
B-	60-64	2.7
C+	55-59	2.3
C	50-54	2.0
C-	<50	0.0

Categories of Degree:

Category of Degree	Description	GPA
Honours Degree with Distinction	Demonstrates an outstanding and comprehensive grasp of the knowledge, skills and competencies required	3.70 – 4.40
Honours Degree	Demonstrates an excellent grasp of the knowledge, skills and competencies required	3.30 -3.69
Pass Degree	Demonstrates a satisfactory grasp of the knowledge, skills and competencies required	2.00-3.29

GLOSSARY TO THE REGULATIONS

TERM DEFINITION

1. **Discipline** – A body of knowledge encapsulated in a set of courses distinguishable from other such bodies on the basis of criteria such as method of enquiry, axioms, areas of application.

2. **Subject** – An area of study traditionally assigned to the purview of a department.

3. **Course** – A body of knowledge circumscribed by a syllabus to be imparted to students by sundry teaching methods and usually followed by an examination.

4. **Faculty Courses** – All courses except Foundation and Co-curricular courses.

5. **In-Faculty Courses** – All Faculty courses originating in medical Faculties.

6. **Out-of-Faculty Courses** – All Faculty courses originating in faculties other than the Medical Faculties.

7. **Foundation Courses** – Broad-based courses, three of which must be taken, and which provide a general foundation of knowledge.

8. **Programme** – A selection of courses (designed to achieve pedagogical goals) the taking of which is governed by certain regulations and the satisfactory completion of which (determined by such regulations) make a candidate eligible for the award of a degree/diploma/certificate.

9. **Credit** – A measure of the workload required of students. 1 Credit hour = 1 hour lecture/tutorial/problem class per week OR 2 hour laboratory sessions per week, for a Semester.

10. **Elective** – A course within a programme taken by choice of the student.

11. **Pre-requisite** - A course which must be passed before another course for which it is required may be pursued.

12. **Semester GPA** – Grade point average (GPA) computed on the basis of all courses done in a semester, without reference to weighting except in terms of credits. (The terms Grade Point, GPA, Quality Hours and Quality Points are defined in the UWI Grade Point Average Regulations Booklet).

13. **Honours GPA** – Weighted grade point average used to determine the class of degree.

14. **Cumulative GPA** – Grade point average obtained by dividing the total grade point earned by the total quality hours for which the student has registered for any period of time excluding courses taken on a Pass/Fail basis, audited courses, courses taken for Preliminary credit, incomplete and in-progress courses.

UNIVERSITY FOUNDATION COURSES

Certain foundation courses are compulsory for all undergraduate students and must be completed before a degree is awarded. Each course is equivalent to 3 credits and the themes have been chosen to promote sensitivity to, and awareness of the distinctive features of Caribbean identity. They include:

- FOUN1001 - Exposition for Academic Purposes
- FOUN1101 - Caribbean Civilization
- FOUN1301 - Law, Governance, Economy and Society

The Medical Faculty recommends that students aim to complete these course within the first two years of the curriculum and we have made provisions for them in the timetables during the first three semesters.

Because it is a University regulation that these courses are completed satisfactorily before a University degree can be awarded, you are required to pass all of them before proceeding into the final two years of the programme.

FOUN1001 EXPOSITION FOR ACADEMIC PURPOSES (3 CREDITS)

This course is designed to: Equip students with the study and research skills they will need in order to get the maximum benefit from all their course at the University; Familiarize them with the linguistic situation in the Caribbean and break down certain misconceptions they usually have about it; Introduce students to the rhetorical modes of discourse; Develop skill in critical thinking and reading.

FOUN1101 CARIBBEAN CIVILIZATION (3 CREDITS)

This course is designed to develop an awareness of the main process of cultural development in Caribbean societies, highlighting the factors, the problematics and the creative output that have fed the emergence of Caribbean identities; to develop a perception of the Caribbean as wider than island nations or linguistic blocs, to stimulate students' interest in, and commitment to Caribbean civilization and to further their self-determination.

FOUN1301 LAW, GOVERNANCE, ECONOMY AND SOCIETY (3 CREDITS)

This is a multi-disciplinary course of the Faculty of Social Sciences which is designed mainly for non-Social Sciences students. The course will introduce students to some of the major institutions in Caribbean society. It will expose them to both historical and contemporary aspects of Caribbean society, including Caribbean legal, political and economic systems. In addition, Caribbean culture and Caribbean social problems are discussed.

THE CORE MEDICAL CURRICULUM

The curriculum includes structured time and unstructured time. Most of the structured time is spent completing essential courses covering the core content (that which all students must learn.)

During the first three years, a modular, system-based approach is used, with courses designed to encourage integration between the basic medical science subjects and the clinical (patient-centred) disciplines. 'Health rather than 'disease' is emphasized but you will begin to meet people in their roles as patients from the first year.

On successful completion of the courses in the first three years, you will be eligible for the award of a Bachelor's Degree in Basic Medical Science (BMedSci) and will continue into the final two years of the MB BS programme, subject to the approval of the University authorities.

During the final two years, students rotate through the main clinical disciplines, with emphasis on general training rather than on specialist hospital practice.

Cross-disciplinary Themes

Cross-disciplinary subject areas such as medical *ethics* and have been worked into the existing courses as themes or strands. These themes are part of the 'core curriculum' and are included in the assessment of students. In addition, a theme encompassing *personal and professional development* has been designed to ensure that the attitudinal components of learning considered as important for good medical practice are included in the overall educational process.

Study Options

In addition to this core curriculum, the programme includes a number of options that allow you to undertake courses and activities during the clinical years in areas of special interest to you. These include *electives.*

Electives

There are elective periods in the Phase II programme. During an elective, you will have the opportunity to spend a supervised period of study in a specialty of your choice. This period of study is useful for exploring future career options. We encourage you to spend it at an institution outside of the UWI if at all possible and to consider including a component of research. Also available in year 4 is a Practical Research elective which can be done here at Cave Hill. It is wise to discuss your plans for your elective with your Academic Advisor by the fourth year or even earlier.

Structure of the Programme

The undergraduate medical programme is divided into Phase 1 (Years 1-3) and Phase 2 (Years 4-5). The

first two years of the new programme are fully semester based while the first semester in year three has been extended using a portion of the summer vacation. This has been done to maintain the desired emphasis on clinical skills training which has been an important strength of the UWI medical tradition. This shortened summer vacation at the end of year two was always a feature of our medical curriculum.

PRE-CLINICAL (Phase 1)

Years 1 and 2 Orientation

In your first 2 weeks, time is devoted to a Faculty orientation exercise intended to complement Freshman's Week activities and to sensitize you about what to expect in the restructured medical programme. Time is allotted for you to meet with both teaching staff and senior students. You are also assigned to Academic Advisors and have an opportunity to attend sessions on study skills, time management and coping with stress. The University has committed itself to providing facilities that take advantage of current trends in information technology and you will need to be comfortable with and competent in their use. Arrangements have been made to ensure that you are familiar with the use of computers in locating information and for communicating with your tutors and colleagues.

Pre-Clinical (Years 1-3)
Aims

- To enable students to understand the development of man and man's relationship to society and the environment
- To provide a thorough and integrated knowledge of the structure and functioning of the human body in health and disease
- To promote personal development and the skills required to obtain information from and communicate effectively with patients and colleagues
- To enable students to carry out a full clinical examination and perform a defined set of simple invasive techniques

Pre-Clinical Courses and Clerkships

Year 1

MDSC1000	Fundamentals of Disease and Treatment
MDSC1103	Introduction to General Embryology and Histology
MDSC1104	Introduction to Molecular Medicine
MDSC1105	The Locomotor System
MDSC1201	Cell Biology
MDSC1202	Introduction to Medical Practice I
MDSC1301	Behavioural Medicine
MDSC1205	The Respiratory System
MDSC1206	Peripheral Nervous System

Year 2

MDSC2103	The Cardiovascular System
MDSC2104	Digestive System
MDSC2105	Health and the Environment
MDSC2201	The Endocrine System and the Skin
MDSC2202	Introduction to Medical Practice II
MDSC2203	The Central Nervous System
MDSC2205	The Reproductive System

Year 3

MDSC3101	Clinical Haematology
MDSC3105	The Urinary System
MDSC3103	Human Nutrition
MDSC3104	Health Services Management
MDSC3200	Understanding Research
MDSC3201	Junior Medicine Clerkship
MDSC3202	Junior Surgery Clerkship
MDSC3303	Aspects of Family Medicine

Pre-Clinical Course Descriptions

Please Note: In order to provide on-going improvement of course delivery and curriculum, all courses are subject to change.

YEAR 1

COURSE CODE: MDSC1000
TITLE: Fundamentals of Disease and Treatment
CREDITS: 6
SCHEDULE: Year 1, Semester 1 & 2

The aim of this course is to provide a background for the better understanding of the system-based courses that follow it. The multidisciplinary approach used and much of the content is basic to an understanding of disease states and how drugs work and it serves as an important introduction to the integrated approach used in the delivery of the other courses in

Phase 1. The content provides a foundation for understanding important basic disease processes such as infection, inflammation, genetic disorders, tumour pathology and disorders of growth and assists students to appreciate how these affect the different organ systems when these are taught later in the programme. It also introduces the chemical structures and families of drugs commonly used in

the treatment of patients and how these work to modulate disease processes.

COURSE CODE: MDSC1103
TITLE: Introduction to General Embryology and Histology CREDITS: 3
SCHEDULE Year 1, Semester 1

The primary aim of this course is to provide students with an understanding of the processes by which a single fertilized ovum develops into specialized tissues and organs to eventually form a complex multicellular organism. It covers the development and differentiation of cells, tissues and organs and provides a general view of human development and the structure of tissues and provides a basis for understanding the relationships and positions of normal adult structures. It serves as the framework for understanding the more detailed development, structure and functioning of body systems and the abnormalities which result from disorders of development.

COURSE CODE: MDSC1104
TITLE: Introduction to Molecular Medicine
CREDITS: 3
SCHEDULE: Year 1, Semester 2

The aim of this course is to introduce students to the principles of Molecular Biology and to show how they may be used to understand and treat human disease. It builds on the fundamentals of the structure and functions of nucleic acids and proteins and serves as an important foundation for understanding advances in genetics and developments in modern medical research.

It covers medical aspects of genetics including population genetics. Molecular techniques used in diagnosis and treatment are presented and ethical implications surrounding the application of molecular biology to medicine are discussed.

COURSE CODE: MDSC1105
TITLE: The Locomotor System
CREDITS: 3
SCHEDULE: Year 1, Semester 1

The aim of this course is to provide the student with a thorough knowledge base of the functional anatomy of the upper and lower limbs and of the spinal column as these relate to each other in health and disease.

As the first in a series of systems - based courses it provides a comprehensive and integrated approach to learning the structure and function of the human body and introduces the anatomical terminology required to describe relationships of structure. Through the use of illustrative cases and relevant pathophysiology, it also helps students to appreciate the features, diagnosis and management of the common clinical conditions that affect muscles, bones and joints.

COURSE CODE: MDSC1201
TITLE: Cell Biology
CREDITS: 3
SCHEDULE: Year 1, Semester 1

Cell Biology (MDSC1201) covers the following objectives: 1) The structure and function of biological molecules; 2) The biochemical pathways of intermediary metabolism; 3) The functional significance of biochemical processes and their regulation in normal and aberrant states. The course is organized into 5 units:

Unit 1: Introduction to biological molecules
This unit covers the structures and cellular roles of amino acids and proteins, enzyme structure and catalysis, enzyme kinetics and bioenergetics.

Unit 2: Structure and function of carbohydrates
The major metabolic pathways of carbohydrate, intermediary metabolism including inborn errors, vitamin deficiencies and their effects on carbohydrate structure and function.

Unit 3: Structure and function of lipids
Lipid classes structure, biosynthesis and degradation, and clinically relevant correlations.
Unit 4: Structure and function of proteins
The metabolism of essential and non-essential amino acids, the urea cycle, heme metabolism, and other specialized products derived from amino acids. Emphasis is given to inborn errors of amino acid metabolism.

Unit 5: Integration of metabolism
This unit focuses on the fast/feed cycle, hormonal regulation of metabolism and the associated organ specific metabolic changes.

COURSE CODE: MDSC1202
TITLE: Introduction to Medical Practice I
CREDITS: 3
SCHEDULE: Year 1, Semesters 1 and 2

This is the first unit of a multi-faceted introductory course which spans the first two years of the programme and is designed to provide students with the foundation skills necessary for their later clinical and hospital-based clerkships.

Unit 1 aims to inculcate at an early stage the attitudes and behaviours appropriate to the practice of medicine. It emphasizes personal & professional development, an important theme running through

the curriculum and encompasses communication skills, professional conduct, including deportment, patient confidentiality and includes a parallel course in basic pre-hospital management of common medical emergencies.

COURSE CODE: MDSC1301
TITLE: Behavioural Medicine
CREDITS: 3
SCHEDULE: Year 1, Semester 1

This course will enable students to apply social and behavioural principles to improve patient care through the development of knowledge of communication skills and psychosocial aspects of health.

This course introduces students to basic issues related to health and illness and approaches to disease prevention. The relevant concepts are illustrated from an individual and lifecycle approach with an emphasis on sociological and psychological factors.

It aims to integrate behavioural, psychological, social, and biological sciences to foster understanding of health and illness. This approach would provide students with a useful framework for the appreciation of how a sick person behaves in a medical setting, in a similar way to the application of biochemistry and physiology in pathology.

It introduces the academic subjects of psychology and sociology, which are the most important behavioural sciences for consideration in medical training. Psychology is the study of the nature, functions and phenomena of human behaviour and is considered as one of the important components of medical education and training.

COURSE CODE: MDSC1205
TITLE: The Respiratory System
CREDITS: 3
SCHEDULE: Year 1, Semester 2

The main aim of this system-based course is to provide students with an understanding of the normal anatomy and physiology of the respiratory system and how it is affected by common disease conditions.

This course addresses the normal and the abnormal structure and function of the human respiratory system, the mechanics of breathing and factors influencing breathing. Gaseous exchange in the lungs in health a disease is covered as well as important drugs used in the treatment of common respiratory illnesses. Aspects of the investigation and care of patients with respiratory disease are introduced to reinforce basic knowledge of the normal state and to highlight the importance of this knowledge to medical practice.

COURSE CODE: MDSC1206
TITLE: The Peripheral Nervous System
CREDITS: 3
SCHEUDLE: Year 1, Semester 2

The main aim of this course is to explain the role of the peripheral nervous system in controlling visceral and skeletal muscle functions and how it can be modulated for therapeutic benefits to the patient. It is the first of two encounters with the Neurosciences in Phase I of the MB BS programme.

Neuroscience is concerned with the study of the human nervous system which consists of two major divisions, the central nervous system (CNS) and the peripheral nervous system (PNS).

In this course, the anatomical organization, functions and regulatory mechanisms of the peripheral nervous system are presented. The content provides the foundation for understanding the neural regulation of the functions of peripheral organs, glands and tissues that are dealt with in later courses.

YEAR 2

COURSE CODE MDSC 2103
TITLE: The Cardiovascular System
CREDITS: 6
SCHEDULE: Year 2, Semester 1

The aim of this course is to provide an overview of the normal and abnormal structure and function of the cardiovascular system. It covers the essential core of information that students are required to know about the cardiovascular system in order to begin their hospital based clinical training.

The course is integrated, so that whilst the teaching of Anatomy, Physiology, Pharmacology, Pathology and Microbiology of the cardiovascular system is emphasized, there is also exposure to introductory clinical knowledge which permits an appreciation of the clinical relevance of the disciplines mentioned.

COURSE CODE: MDSC2104
TITLE: The Digestive System
CREDITS: 6
SCHEDULE: Year 2, Semester 1

This course aims to provide students with a fundamental understanding of the gastrointestinal tract and its importance in the processes of digestion, absorption and excretion as well as the role it plays in homeostasis.

It covers the gross anatomy, embryology, histology and functional aspects of the gastrointestinal tract and its accessory organs including morphological concepts related to the processes of mastication, deglutition, motility and secretions, digestion, absorption and defaecation. It provides students with an appreciation of the important pathophysiology of the digestive system and highlights the basic scientific knowledge behind the principles governing the management of common disorders.

COURSE CODE: MDSC2105
TITLE: Health and the Environment
CREDITS: 3
SCHEDULE: Year 2, Semester 2

Building on the material introduced in the Year 1 Health Care Concepts Course concerning wellness and disease prevention, this course aims to provide students with an overview of the interrelationship between man and his environment, and of the environment as a major determinant of health.

It introduces students to disaster management in the Caribbean, including both natural and technological disasters. Emphasis is placed on credible disasters, the role of the physician in the overall management of disasters generally and specifically in the hospital setting.

In addition, a spectrum of important viral, bacterial and parasitic infections is included with emphasis on sources, routes of transmission, prevention and control.

COURSE CODE: MDSC2201
TITLE: The Endocrine System & Skin
CREDITS: 3
SCHEDULE: Year 2, Semester 1

In both development and delivery, this course utilizes a multidisciplinary approach to the teaching of applied anatomy and physiology of the endocrine system and the skin. By combining clinical and pathological aspects, it provides relevance and a critical link between under-standing the basic medical sciences in the normal state and applying this knowledge to diseases that affect patients.

The chemical structure, synthesis, mechanisms of action, and functions of hormones are illustrated along with the various regulatory mechanisms that affect their production. In addition, the content includes the structure and function of the skin and the medically important conditions affecting it.

COURSE CODE: MDSC2202
TITLE: Introduction to Medical Practice II
CREDITS: 3
SCHEDULE: Year 2, Semester 2

The main aim of this course is to prepare students for the junior clerkships in Year 3 by training them in the art and practice of clinical history-taking, writing case histories and carrying out a simple physical examination.

During a four-week, full-time block, students receive a series of lectures/demonstrations.

Where performance, attendance and/or participation is considered unsatisfactory or unsafe, students may be required to attend remedial sessions before being permitted to commence the junior clerkships in year 3.

COURSE CODE: MDSC2203
TITLE: The Central Nervous System
CREDITS: 6
SCHEDULE: Year 2, Semester 2

The aim of this course is to equip students with comprehensive knowledge about the normal structure and functioning of the central nervous system and the important pathological conditions that affect it.

It takes an in-depth look at the structure and function of the central nervous system (the brain and spinal cord), and introduces students to important diseases affecting the central nervous system, the methods used in investigating patients, and the treatment modalities employed, including pharmacotherapy. Additionally, it covers important drugs acting on the central nervous system, the investigations used to aid clinical diagnosis and outlines the principles behind medical and surgical treatments of central nervous system disorders.

YEAR 3

COURSE CODE: MDSC3101
TITLE: Clinical Haematology
CREDITS: 3
SCHEDULE: Year 3, Semester 1

This course builds on the Fundamentals Course in Year 1 and reviews the normal structure and function of the haematological and lymphoreticular systems including the spleen, thymus and lymph nodes and provides an important basis for moving on to the applied pathology clerkship component in Year 4.

Important disorders of the blood and lymphoreticular system are introduced along with methods of diagnosis and the principles of management. The causes and classification of common or important inflammatory and neoplastic conditions are highlighted and made relevant by means of illustrative cases.

COURSE CODE: 2205
TITLE: The Reproductive System
CREDITS: 6
SCHEDULE: Year 2, Semester 2

This course aims to provide students with sufficient knowledge of the macroscopic and microscopic structure of the human reproductive system to enable them to understand both normal reproductive function and the effects of common clinical abnormalities on these systems.

It employs an integrated approach and provides a basis for students' understanding of the relevant anatomy of reproductive systems and how these function in health and disease. By inclusion of relevant pathophysiology and case-based problems, it provides a foundation for appreciation of the features, diagnosis and management of common clinical conditions and prevention.

COURSE CODE: MDSC3103
TITLE: Human Nutrition
CREDITS: 3
SCHEDULE: Year 3, Semester 1

This course is designed to acquaint medical students with the basic and essential concepts of nutrition in medicine. It aims to explain the role of nutrition in determining patients' wellbeing, its interaction with their medical/ surgical conditions(s), and how to apply simple therapeutic principles to improve their nutritional state.

It does not seek to create clinical nutritionists, but rather to instil in students the idea that nutrition is a theme with which they need to be concerned in every aspect of health and disease in patients with whom they come into contact.

COURSE CODE: MDSC3105
TITLE: The Urinary System
CREDITS: 3
SCHEDULE: Year 3, Semester 2

The Urinary System course in the 3rd year of the MBBS programme offers a fundamental presentation of the various components of the urinary system – kidney, ureter, urinary bladder and other associated structures. The course describes the development, anatomical characteristics – both at the macro and micro level, functions, structure-function relationship, functioning of the system under abnormal conditions, invasion of the system by pathogenic organisms, and principles of treatment by using drugs and preventive measures. This course also describes interrelationship of the urinary system with other systems of the body, its role in the maintenance of homeostasis, various feedback mechanisms by which kidneys keep the physiological variables within normal limits.

COURSE CODE: MDSC3104
TITLE: Health Services Management
CREDITS: 3
SCHEDULE: Year 3, Semester 1

This is a web-enhanced course designed to equip medical students with the basic skills, attitudes and competencies to be effective team members, leaders and managers. While integrating the theme of personal and professional development, it covers aspects of health services organization, management in the public and private sectors, with particular reference to management principles, policy formulation, planning and evaluation.

The management of resources of people, money and supplies, will include manpower planning, utilization and retention, financing and health care, accounting and management in health. Leadership and communication skills will be emphasized. The knowledge and skills gained in this course are designed to benefit students as they later assume managerial roles at all levels in the health sector.

COURSE CODE: MDSC3200
TITLE: Understanding Research
CREDITS: 3
SCHEDULE: Year 3, Semester 2

Regardless of whether or not graduates become involved in health research, as practicing physicians, they will be faced with the difficulty of keeping up-to-date in their chosen field. In the face of a huge and expanding amount of new information, they will be required to locate current and reliable information from a variety of sources. The ability to interpret data and to separate what is reliable from what is not is a skill that they must acquire.
This course aims to introduce students to the role of research in the practice of medicine, to encourage the judicious use of research information and to kindle an interest in knowledge creation (research). Students are expected to develop an enquiring attitude to the acquisition and use of the available evidence to inform health care delivery. It includes an introduction to basic epidemiology, the use and interpretation of biostatistics and an exploration of the tools used in carrying out health-related research.

COURSE CODE: MDSC3201
TITLE: Junior Medicine Clerkship
CREDITS: 9
SCHEDULE: Year 3, Semester 3

This full-time clerkship is one of three junior rotations which represent the students' first clinical 'apprenticeship' with the healthcare team. It builds on the skills taught in the Introduction to Medical Practice course in years 1 and 2, and is the first opportunity for the student to be fully assigned to medical patients as part of a team. It is intended to reinforce previous teaching and to provide the practical experiences necessary to enhance the students' basic clinical knowledge.

The clerkship is conducted at the Queen Elizabeth Hospital. Students are assigned to patients admitted to their service and are given responsibility under supervision for aspects of their care. They keep written records, assist with day-to-day management and learn to interpret laboratory results. They attend ward rounds, participate in the discussion of management and spend time with the emergency duty team, participating in post call ward rounds where they are required to present cases they have clerked for admission.

COURSE CODE: MDSC3202
TITLE: Junior Surgery Clerkship
CREDITS: 9
SCHEDULE: Year 3, Semester 3

This full-time clerkship is designed to provide students with their first practical opportunity to participate in the care of surgical patients and to provide hands-on, supervised experience in history-taking and physical examination. Students are assigned in small groups to surgical firms at the Queen Elizabeth Hospital.

Bedside teaching takes place in the wards, in the outpatient clinics and in the Accident & Emergency Unit where students practice the regular keeping of accurate records. They are shown how to use the information obtained from the history and physical examination to arrive at a working diagnosis and how laboratory investigations are used for confirmation and to assist in managing patients.

They are taught how to perform and assist in simple surgical procedures including venipuncture and the suturing of simple wounds and, as they begin to assume limited clinical responsibility for the care of surgical patients, they participate increasingly in the day-to-day responsibilities of patient care under the supervision of resident and senior teaching staff.

COURSE CODE: MDSC3203
TITLE: Aspects of Family Medicine
CREDITS: 9
SCHEDULE: Year 3, Semester 3

This clerkship, uses a mix of community, hospital and ambulatory care experiences. This clerkship is delivered in three 2-week units- Paediatric Inpatients, Paediatric Outpatient clinics, and Child health clinics in the polyclinic.

This clerkship uses a combination of community and hospital care experiences. They are assigned in small groups, to patients admitted to the paediatric services at the Queen Elizabeth Hospital and practice accurate medical record keeping.

Practical 'bedside' teaching takes place at the Queen Elizabeth Hospital and the Government's polyclinics.

Student performance is assessed by the Academic staff to whom students are assigned as they participate in the day-to-day responsibilities of patient care, under the supervisor of resident and senior teaching staff.

This provides the opportunity to practice history taking and physical examination techniques especially those more specific to children and to make clinical case presentations.

Students are taught to use clinical data to arrive at a working or differential diagnosis and how laboratory investigations are used for confirmation and to assist in patient care.

Clinical Course Descriptions

<u>Years 4 and 5</u>
Students who successfully complete the three-year Phase 1 programme will commence the final two years of undergraduate training. These consist primarily of hospital-based clerkships although rotations will include clerkships in community settings and 2 electives.

In year 4, you are exposed in small groups to a variety of specialty and sub-specialty disciplines in a series of short rotating clerkships. The emphasis is on special techniques of examination and modes of investigation. In support of this, students also spend some structured time in the laboratory disciplines under supervision of the Departments of Pathology and Microbiology.

The final year of training is designed to prepare you for your internship. A series of clerkships in five

major disciplines provide you with experiences in the overall care and follow-up of patients with common and important conditions. You are expected to participate in all the activities of the clinical service to which you are attached and are supervised by the consultant and resident staff. Most of your learning takes place during informal bedside teaching. Clinical competence must be certified by each of your tutors as a pre-requisite for proceeding.

The final year concludes with the sitting of the written and practical/clinical components of the final MB BS (Phase 2) examination.
During the 4th year, students are required to complete a total of 13 clerkships.

During the 5th year, students are required to complete a total of 7 clerkships.

At the end of 5th year, students are required to take 3 FINAL comprehensive exams in three disciplines.

Clinical Courses and Clerkships

Year 4

MEDC4303	Psychiatry/Ethics and Humanities
MEDC4304	Elective Clerkship
MEDC4309	Social and Preventive Medicine
MEDC4310	Radiotherapy
MEDC4311	Radiology
MEDC4312	Dermatology
MEDC4314	Pathology and Microbiology
MEDC4320	Orthopaedics Surgery I
MEDC4330	Obstetrics and Gynaecology I
MEDC4343	Otolaryngology I (ENT)
MEDC4344	Ophthalmology
MEDC4345	Anaesthesia and Intensive Care
MEDC4350	Family Medicine

Year 5

MEDC5255	Elective Clerkship
MEDC5301	Child Health II Clerkship
MEDC5302	Community Health I
MEDC5320	Medicine and Therapeutics I Clerkship
MEDC5331	Obstetrics and Gynaecology II Clerkship
MEDC5340	General Surgery II Clerkship
MEDC5346	Accident and Emergency Medicine Clerkship

MDSC5322 Medicine & Therapeutics (Exam Code)
MDSC5330 Obstetrics & Gynaecology (Exam Code)
MDSC5341 General Surgery (Exam Code)

As May/June 2024, The Final MBBS Exam will take a new format of a Unified Examination. The exam will comprise of a written compoenent and an Objective Skills Clinical Exam (OSCE) component. Exams codes will be implemented in due course.

Year 4 Clerkships

COURSE CODE: MEDC4309
TITLE: Social and Preventive Medicine
CREDITS: 4
SCHEDULE: Year 4, Year Long
DURATION: 4 Weeks

Over the course of four weeks, the clerkship provides students with learning opportunities to gain practical experience in the field of public health. The overall aim of the clerkship is to introduce medical students to the principles and practice of public health through exposure to promotive, preventive, curative and rehabilitative services. Students are given brief exposures to the five core areas of public health. They experience the rudiments of Health Promotion by delivering health education talks to patients in primary health care centres (polyclinics). Environmental Health exposures include visits to homes, restaurants, farms and the seaport as students consider prevention of food-borne and vector-borne illnesses. Their Social and Behavioural Science exposure takes the form of reflective discussions and palliative care clinics which emphasize the sociology of death and dying. Finally, students are asked to use basic Epidemiology and Biostatistics principles to read and critically analyse journal articles relevant to patient care.
The course builds on the concepts and principles taught in the following pre-clinical courses: Health Care Concepts, Health and Environment, Health Services Management and Understanding Research.

Course Code: MEDC4345
TITLE: Anaesthesia and Intensive Care
CREDITS: 4
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

Medical students are rotated for four weeks in the Anaesthesia and Intensive Care clerkship. The main aims of the rotation are to provide knowledge and understanding of preoperative evaluation and preparation, intra operative and postoperative management of surgical patients, and the principles of managing critically ill patients. During this rotation the medical students get an exciting opportunity to experience the integration of basic sciences like physics, anatomy, physiology, pharmacology etc., into clinical practice. The

principles learnt during this rotation will be of immense value irrespective of the future field of your practice

COURSE CODE: MEDC4312
TITLE: Dermatology
CREDITS: 2
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

This four- week clerkship runs in parallel with ENT and radiology. The clerkship is designed to help students develop skills in taking a dermatological history; guide students in the use of proper descriptive terms and accepted dermatological terminology in the presentation of cases; ensure that students learn to recognise common lesions and develop a rational approach to clinical diagnosis of dermatological conditions; sensitise students to the psychological and emotional consequences of some dermatological disorders.

COURSE CODE: MEDC4343
TITLE: Otolaryngology I (ENT)
CREDITS: 2
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

The four-week clerkship runs in parallel with Dermatology and radiology. The clerkship is designed to inform the student in the fundamental principles necessary for diagnosis and management of the more common disorders in ear, nose and throat, including the correct use of the auriscope. It is designed to enable the student to recognise those disorders which can be managed safely and competently by all doctors at the primary care level, and to distinguish those which require specialist attention. In addition, the student is instructed to understand the significant relationships between otolaryngologic disorders and the wider areas of general medical and surgical diseases

COURSE CODE: MEDC4350
TITLE: Family Medicine
CREDITS: 4
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

This rotation is a 4-week clinical clerkship to expose students to the practice of Family Medicine in the community clinic setting. It provides students with practical experience in patient care in the community with an emphasis on Family practice, and delivery of health care to patients and their families in a primary care setting. It provides an opportunity to build on professional and interpersonal skills and patient communication skills.

COURSE CODE: MEDC4330
TITLE: Obstetrics and Gynaecology I
CREDITS: 4
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

Students rotate through this 4-week clerkship in small groups. The primary emphasis is on the acquisition of knowledge & skills in normal labour ward practice and conduct of normal deliveries. To this end, the student is required to observe vaginal deliveries. Following this period of observation, the student is required to perform 5 normal vaginal deliveries. Patients delivered by the students are monitored through their labour by the student, and this monitoring and the delivery is supervised by a midwife.

COURSE CODE: MEDC4344
TITLE: Ophthalmology
CREDITS: 2
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

Medical students rotate through a 4-week clerkship in parallel with radiotherapy and are exposed to all aspects of Ophthalmology. The aim of this clerkship is to ensure that medical students acquire enough knowledge and experience in ophthalmology to enable them to recognize common eye complaints as well as less common eye complaints of great clinical significance – whether sight-threatening or life-threatening. As a result, the student will have the necessary skills to allow them to function at the level of a family physician or emergency room physician, and recognize eye conditions that warrant referral to an ophthalmologist.

COURSE CODE: MEDC4320
TITLE: Orthopaedics Surgery I
CREDITS: 4
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

- This four-week clerkship is designed to allow students to develop the following:
- Ability to diagnose **common "elective"** musculoskeletal disorders that a general practitioner will see in practice.
- Ability to recognize the **common traumatic** musculoskeletal injuries, understand the mechanisms of injury and to treat these cases in an appropriate way.
- Ability to recognize the **rare but serious** musculoskeletal conditions that require urgent referral for specialist orthopaedic management.

- Awareness of the impact of musculoskeletal system injuries and disorders on the patient, family, community and the nation at large
- Awareness of the allied health professionals that are part of the multidisciplinary team responsible for rehabilitation of patients with musculoskeletal conditions

At the end of the clerkship, students should be able to discuss the clinical presentation, clinical pathology and management of common and serious orthopaedic conditions.

COURSE CODE: MEDC4314
TITLE: Pathology and Microbiology
CREDITS: 8
SCHEDULE: Year 4, Year long
DURATION: 8 Weeks

This 8-week clerkship is composed of five disciplines; Pathology (Anatomical and Surgical), Microbiology, Haematology, Chemical Pathology and Immunology and is designed to provide medical students with the clinical perspective of the five disciplines using the pre-clinical exposure as the background to these fundamentals. Students survey these fields with the focus of understanding the current and evolving role of these disciplines in patient care. Students attend formal tutorial sessions, observe laboratory procedures in the anatomic, clinical, haematology, molecular diagnostic, and microbiology laboratories, and prepare for and deliver presentations.

This clerkship provides valuable understanding of the inner workings of these departments and how they are used in patient care.
Evaluation is based on attendance and completion of in-course activities and a formative evaluation at the end of the clerkship.

COURSE CODE: MEDC4303
TITLE: Psychiatry, Ethics and Humanities
CREDITS: 10
SCHEDULE: Year 4, Year long
DURATION: 8 Weeks

During this eight-week rotation Psychiatry, Ethics and Humanities in delivered along with Ethics and Humanities. Psychiatry, Ethics and Humanities is an integral part of medical training as patients usually present to their general practitioner first with signs and symptoms of psychiatric disorders. In addition, physical disorders can present with signs and symptoms of mental illness. Therefore, MBBS graduates need to be able to diagnose and manage patients with psychiatric conditions and understand the interaction between the mind and body.
This clerkship will allow MBBS students to develop the clinical skills necessary to assess and manage patients with Psychiatric conditions. Students will attend and participate on ward rounds and psychiatric clinics, clerk patients on the psychiatric wards, make case presentations and submit written case reports, and participate in tutorials. The Psychiatric wards and out-patient clinic at the Queen Elizabeth Hospital, Polyclinic Psychiatry outpatients departments, Sheltered Workshop/Occupational Therapy Department, and the Child Guidance Department at the Psychiatric Hospital will facilitate the clinical clerkship.

COURSE CODE: MEDC4311
TITLE: Radiology
CREDITS: 2
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

During this four- week rotation delivered in parallel with ENT and Dermatology, students will learn the role of diagnostic radiology in the investigation of patients and how to avoid its misuse, the fundamentals of the interpretation of radiographs, and the value of ultrasonography in diagnosis and its limitations. They will learn about the basic methods of investigating a diseased organ system. They will develop an understanding of chest radiology, the plain abdomen, the cardiovascular system, basic obstetric ultrasound, basic bone radiology, the gastrointestinal series, basic skull radiology with emphasis on emergency conditions and the techniques, contrast media used and the complications that can occur in the different contrast examinations.

COURSE CODE: MEDC4310
TITLE: Radiotherapy
CREDITS: 2
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

This four-week rotation is delivered in parallel with Ophthalmology. During the rotation students are expected to understand the applications of radiotherapy in its various forms in the optimal management of various malignancies as well as some non-malignant conditions, and learn the basic principles and mechanisms of radiotherapy in achieving cell kill. They will also learn normal tissue reactions to radiotherapy and their management, the late effects of radiotherapy on organs and structures and the limitations of radiotherapy with respect to critical organs and structures. Students also study the principles and application of cancer chemotherapy including its side effects in different malignancies and get an overview of the radiotherapy department, including the treatment units and treatment planning systems. They also become familiarised with the use of radioactive isotopes; both

diagnostic and therapeutic, e.g. 1-l3l in hyperthyroidism. They will become familiar with intravenous access techniques, total parenteral nutrition and nutrition in cancer. In addition, they become oriented to the management of terminally ill patients with malignancy; including symptom control, palliative care, and the concept of care vs cure.

A four-week elective period is allowed in fourth year as scheduled. The elective may be taken in a clinical, basic science or research area and must be pre-approved by the faculty with a designated supervisor before the student starts the elective.

Note: A Practical Research Elective is available (Practical Research for Medical and Health Science Students – MDSC4304)

The elective does not contribute to the GPA and is a Pass/Fail course

COURSE CODE: MDSC 4304
TITLE: Practical Research for Medical & Health Sciences
CREDITS: 2 (P/F Course)
SCHEDULE: Year 4, Year long
DURATION: 4 Weeks

This course is available as an elective only. It introduces students to a practical research experience in health sciences and may be done during the 4th year elective period. It includes **specific instruction** and practical learning experiences covering the literature review, study design and processes for summarising data. Students will be exposed to techniques for data acquisition and management. The knowledge and skills acquired will enable students to design and execute a simple research study. Topics addressed in the course are: Interpretation of Statistical Techniques; Critical Appraisal and Summary of the Literature; Planning a Research Project. At the end, students will produce a synopsis including: background, methodology, results and interpretation of the results. Practical examples, applications, issues and exercises requiring critical thinking and effective written presentations will be exphasized.

Year 5 Clerkships

COURSE CODE: MEDC5346
TITLE: Accident and Emergency Medicine Clerkship
CREDITS: 6
SCHEDULE: Year 5, Year long
DURATION: 4 Weeks

Emergency Medicine is the specialty where the physician works in a fast paced and unpredictable environment to provide confident, decisive and compassionate care to demanding cases that present to the Accident and Emergency department. This involves the evaluation, management and prevention of unexpected illness and injuries.

The four-week clerkship at the Queen Elizabeth Hospital A&E Department serves as an introduction to the specialty of Emergency Medicine as practiced within the Caribbean. This provides a unique experience as the Queen Elizabeth Hospital is the main portal for the delivery of care to the traumatised patient and to the broad spectrum of medical and surgical emergencies.

During the Emergency Medicine clerkship students will be exposed to triage where there is the differentiation of ill patients from those requiring less urgent medical care. They also gain exposure to pre-hospital care and Emergency Medical Services. This exposure will allow the student to recognize those cases that require immediate life-saving intervention without full background knowledge of a patient's medical history. Furthermore, this clinical exposure will allow the student to evaluate the undifferentiated emergency patient who presents with illnesses from other specialties such as medicine, surgery, orthopaedics, paediatrics, gynaecology, or ophthalmology.

COURSE CODE: MEDC5301
TITLE: Child Health II Clerkship
CREDITS: 9
SCHEDULE: Year 5, Year long
DURATION: 9 Weeks

This nine-week clerkship, builds on the student's previous knowledge and experience gained in third year. With a background of normal health, development and behaviour, students will now be expected to recognise abnormalities and develop a holistic approach to achieve optimal health for the child and their parents, while their own personal and professional development towards their career as a physician is occurring.

The goals of the paediatric clerkship are that every student should: Acquire a basic knowledge of growth and development (physical, physiologic and psychosocial) and of its clinical application from birth through adolescence; develop communication skills that will facilitate the clinical interaction with children, adolescents and their families, ensuring that complete, accurate data is obtained; develop competency in the physical examination of infants, children, and adolescents; acquire the knowledge necessary for the diagnosis and initial management of common acute and chronic illnesses; develop

clinical problem-solving skills; acquire an understanding of the influence of family, community and society on the child in health and disease; develop strategies for health promotion as well as disease and injury prevention; and develop the attitudes and professional behaviours appropriate for clinical practice.

COURSE CODE: MEDC5302
Title: Community Health I
Credits: 6
Schedule: Year 5, Year long
DURATION: 4 Weeks

During this four-week rotation, students work at the General Practice Unit of the Edgar Cochrane Polyclinic. This clerkship, their second exposure to Family Medicine builds on the work done in MEDC 4350. They are further introduced to Family Medicine as a clinical and academic discipline. They see the role of Family Physicians as personal doctors; primarily responsible for the provision of comprehensive and continuing care to every individual seeking medical care irrespective of age, sex and illness.

COURSE CODE: MEDC5320
TITLE: Medicine and Therapeutics I Clerkship
CREDITS: 9
SCHEDULE: Year 5, Year long
DURATION: 9 Weeks

This nine-week rotation builds on the preclinical or Phase 1 training period. Students are expected to learn and appreciate the common aspects of content, concepts, applications or methods can be identified among subjects learned in the various disciplines and that these aspects can be used to organise both their learning and knowledge. This integrated thinking is expected to extend into and bear full fruit in the clinical period, with its application to the understanding of clinical syndromes and the solution of clinical problems.

Success in the final examination in Medicine and Therapeutics depends on the demonstration of proficiency in the clinical method. Students must be able to show a practiced ease in obtaining a history, in eliciting physical signs and arriving at a diagnosis and appropriate management plan.

These skills cannot be acquired from textbooks or in a library - they can only be acquired in the wards and outpatient clinics. Proficiency is directly proportional to the time and effort spent with patients, practicing correct clinical methods. Students must therefore avail themselves of every opportunity to see and examine routine as well as unusual clinical cases. It is as important to be able to recognize the clinically normal as it is to recognize the abnormal.

COURSE CODE: MEDC5331
TITLE: Obstetrics and Gynaecology II Clerkship
CREDITS: 9
SCHEDULE: Year 5, Year long
DURATION: 9 Weeks

Each student rotates through Obstetrics & Gynaecology for nine weeks. This rotation is usually done in groups and each student rotates through the four teams (firms) for 2 weeks at a time. There is participation in clinics, operating theatre, ward rounds and the day-to-day management of patients on the ward. Attendance at clinics, surgeries assisted at, and cases presented and procedures performed are added to the "attendance card". Each component of this clinical clerkship provides its own opportunities for teaching and learning.

COURSE CODE: MEDC5340
TITLE: General Surgery II Clerkship
CREDITS: 9
Schedule: Year 5, Year long
DURATION: 9 Weeks

The nine–week surgical clerkship gives an opportunity to correlate symptoms, signs, laboratory results and other investigations with aetiology and pathophysiology in a living human being. The clerkship is designed as a working programme and is based on the following objectives: To receive knowledge about common surgical diseases and management regardless of ultimate career choice; to understand the pathophysiology of disease processes as the basis for diagnosis and management; to develop basic surgical skills useful for all physicians in elective/emergency situation outside or within a hospital; to be exposed to different specialties of surgical practice so as to be able to make a future career choice; to promote self-directed learning; and to develop behavioural qualities necessary for good medical practice such as self-discipline, ethical practice, integrity, a sense of responsibility towards patients and a desire for life-long learning.

COURSE CODE: MEDC5255
TITLE: Elective Clerkship
CREDITS: 4 (P/F)
Schedule: Year 5
DURATION: 5 Weeks

A five-week elective period is allowed in final year as scheduled. The elective may be taken in a clinical, basic science or research area and must be pre-

approved by the faculty with a designated supervisor before the student starts the elective.

The elective does not contribute the GPA and is a Pass/Fail course

MEDICAL FINAL EXAMINATIONS

MEDC5321 - Medicine & Therapeutics
MEDC5330 - Obstetrics and Gynaecology
MEDC5341 - General Surgery

As May/June 2024, The Final MBBS Exam will take a new format of a Unified Examination. The exam will comprise of a written compoenent and an Objective Skills Clinical Exam (OSCE) component. Exams codes will be implemented in due course.

A Note on your Internship

At present, award of the MB BS Degree from the University of the West Indies entitles the graduate to apply for provisional registration in the health services of some Caribbean countries. Provisional registration is a limited license to practice under supervision and lasts for 12 months and practice can only be undertaken in posts recognized for this purpose. Satisfactory completion of the internship entitles you to full registration and a license to practice medicine independently within the English-speaking Caribbean or to pursue further graduate training. The Diploma in Family Medicine is designed for those planning to go to primary care and is hoped that in the future it will become a requirement for independent primary care practice.

Up until 2003, the General Medical Council (GMC) in the United Kingdom was the accrediting body for the University of the West Indies. In that year, a decision was made by the GMC that it would no longer act as the accreditation authority for the University of the West Indies. As a result, graduates of the UWI (and several other 'commonwealth' universities) are no longer entitled to automatic GMC registration. In July 2004, The Caribbean Accreditation Authority for Education in Medicine and Other Health Professions (CAAM-HP) was established by the Governments of the Region (CARICOM). The Caribbean Accreditation Authority replaces the GMC for the purpose of accreditation of medical programmes in the region, and is analogous to other national and regional accreditation authorities, e.g. the GMC and the Australian Board.

ASSESSMENT AND EXAMINATIONS

An Overview

Assessment of students in the medical undergraduate programme takes the form of written and practical/clinical and in some cases, oral examinations. Coursework, projects, seminars and other in-course assessments may contribute to overall course grades where appropriate and, in keeping with the multidisciplinary approach to teaching, your assessments will become more integrated and case-based as you proceed.

Years 1 and 2

Students are required where appropriate to complete coursework, to write end-of-course assessments, and to sit examinations at the end of each semester. Grades are calculated for each year using the results of all of these. The following assessment for Phase-1 courses have been in effect since September, 2012.

- A weighting of 60% on final exams with a 40% weighting on in-course assessments.
- A Pass on final exams is a requirement for successful academic progress in individual courses.
- Web-based and research courses will remain a hybrid mix determined by Faculty Examiners.

Year 3

MDSC3105 is weighted 60% for final exams and 40% for in-course assessments.

The assessment for the following courses is weighted 100% on in-course assessments. The assessment rubrics will be decided by course examiners.

- MDSC3101 – Clinical Haematology
- MDSC3103 - Human Nutrition
- MDSC3104 - Health Services Management
- MDSC3200 - Understanding Research
- MDSC3201 – Junior Medicine Clerkship
- MDSC3202 – Junior Surgery Clerkship
- MDSC3203 – Aspects of Family Medicine

At the end of the third year, successful students are eligible for the award of a Bachelor of Basic Medical Science Degree, the Bachelor's Degree in the Medical Sciences.
Please note that failure in resit examinations will constitute 'failure to progress' and may require you to repeat the entire year, or withdraw from the programme.

Years 4 and 5

In the final two years, students are assessed by a combination of on-going assessment and written and oral/clinical examinations at the end of each clerkship. These are designed to evaluate a range of professional skills including attitude to work and interpersonal skills. All components of the assessment must be passed in order to pass a clerkship. Attendance is mandatory and a minimum of 80% attendance is required in order to pass a clerkship.

In the final year, clinical competence is assessed formally in each of your six senior clerkships. Satisfactory competency must be certified by your supervisors in each of the senior clerkships in order for you to write the final Phase 2 (MB BS) examination at the end of the fifth year.

Because this year is a preparation for internship and future practice, your supervisors will also be looking at how you approach your work, your enthusiasm, punctuality, commitment and use of initiative as well as your relationships with patients, students, teachers and other members of the health team. Although often difficult to quantify, demonstration of these characteristics in a caring manner is the hallmark of the medical profession. The society and your patients expect it and your medical school is committed to promoting it.

Electives

You are not normally assigned grades for an elective but a report indicating satisfactory attendance and performance from your supervisor must be submitted along with your own written report. As a minimum, your report should outline the programme of study that was undertaken, your aims and how well these were achieved. In the case of research projects undertaken, your report should include the methods, data collected, results and a discussion. If the project was 'written up or presented at a conference, this should be indicated. Elective reports may be considered in the determination of Honours and Distinctions.

Each module has its own Learning Guide. These are produced to assist you in managing your learning. The Learning Guides tell you what you're going to be taught, why and how, and also list resources you can use to aid your learning. Most will contain examples of questions to help with your self-assessment and a list of names with contact information for Lecturers and Course Co-ordinators who can help you if you're having problems. Do not hesitate to do this if things go wrong.

Recommended texts are listed but are only suggestions from your tutors. If you find that you can work better with another book that isn't listed, check with colleagues and with the learning outcomes in the Learning Guide to ensure that you will still cover the required material.

By now you must be wondering if getting into the MB BS programme was really a good idea. It's true that there are only so many hours in a week so how do you fit in all the teaching and self-study, and still have a life?

It all boils down to proper time management. This is a delicate area for all university students, and is probably more so for medical students with their heavier than average workload.

Managing your time effectively

The key to effective time management is to determine what works best for you as an individual, and to accept that this may well differ from what works for others around you. It is important that you take responsibility for your own time management. Start working on it now. It is good training for life as a doctor.

The MB BS is undoubtedly stressful at some points, and it is essential that you learn to minimize your stress, and face what cannot be avoided. Ineffective management of time is one of the most common causes of stress, and is largely avoidable. Effective time management depends on organization and self-discipline – both important ingredients of a physician's life.

One system of time management that you might consider is based on splitting each week of the semester into 21 sessions - mornings, afternoons and evenings. Of these 21 sessions, not more than 8 or 9 are usually occupied by timetabled activities, leaving you with 12 other potential slots. It is strongly suggested that you devote 6 of these to self-study, leaving the other 6 open to fit in time for scheduled recreation and other activities. Each session is about 3 or 4 hours long, and can be split into shorter periods for studying as suggested previously.

A system such as this can be a useful guide in the early days of the course but with time, you are likely to develop your own way of doing things. For example, if you know that the period just after lectures is an unproductive time for you, then plan something other than study for that time. If another system works for you, go with it, but remember to plan study sessions to take advantage of the advice we gave you about concentration and recall.

Set yourself deadlines, and stick to them. Don't spend lots of time planning and thinking about work – just do it! Even the short breaks in the daily timetable can

and should be filled with discussion and other useful activities.

STUDY SKILLS

Tips on getting the most out of the course

How to learn from lectures

Unfortunately, there are limited opportunities for individual staff-student contact during lectures because in many cases a large amount of information has to be delivered in a relatively short time. We already know that even 50 minutes is a bit too long for us to maintain concentration. It is easy to fall asleep, daydream, or simply copy down notes without engaging your brain. The important thing is to keep paying attention and not to switch off. But how can you make sure you get the most out of lectures?
The key is to actively engage yourself with the material being presented.

Before the lecture, find out the topic from the schedule. Write down everything you know about it and what you think the Lecturer will be covering so that you can listen for the main points.
During the lecture, write down your own thoughts and ideas about the topic. Ask questions if you have an opportunity and try to answer for yourself any questions posed to others. Highlight anything you're unsure about to remind yourself to check it out later.

After the lecture, review your notes as soon as possible and try to highlight key points. Clarify misunderstandings and fill in gaps by comparing notes with a colleague. Write a summary if you have time and do the associated reading as soon as possible. ACTIVELY RECALL the content BEFORE reviewing your notes or reading further. This approach of "Active recall" is key to consolidating information, and is well worth the effort.

Making Notes

Lecture notes are something you need to think about and create, not something you passively receive. The key to successful note-making is to develop a style that suits you. There is no 'correct' way, and most people find they need to be flexible and to adopt methods according to the situation and the material presented.

In general, writing single key words or phrases is more likely to trigger recall by allowing the brain to form links between ideas.
Transcribing lecture notes in a tidy form is a waste of your time. Instead, spend that time summarizing the main points.

But changing old habits is difficult. It takes time and perseverance but stick with it and it will pay off in the end.

Seminars and group work

In your curriculum, you will spend a lot of your time working in groups. These groups will vary in size, and are sometimes, but not always, led or facilitated usually in a problem oriented or case base small group session by a tutor. One of the objectives of medical training is to assist you to work effectively as a member of a team - a critical skill for your future in the profession.

There are many benefits to be derived from working in a group. Among other things, it helps you develop good communication skills and some of the 'higher order' thinking skills, such as reasoning and analysing. It also promotes collective thinking and teaches you to value the views of others.

Group discussion can be stimulating and challenging, but a group session will only work if people are able and willing to contribute. Effective group work is most likely to occur when members are well prepared, share a common purpose and are willing to interact openly with one another.
People often feel inhibited about contributing to a group discussion because they feel that everyone else is smarter and more articulate than they are. However, the others are probably far less concerned about what you say than what they say because they are worrying about what you'll think of them. Remember it is a joint discussion.

Don't seat yourself outside the group - you need to be able to see everyone's face and to hear what they're saying. Be prepared to listen and if you don't understand what's going on, say so. The chances are that everyone else is thinking the same thing.

Being able to work well in groups is an important skill and it will help if you can gain an understanding of what makes them work effectively. Establishing a smaller study group of 2-4 is also of great value.

Labs and Practicals

A lot of your timetabled teaching in the first two years will include practical and laboratory sessions. Although this is often more interesting than just 'beating the books', it can be difficult to be sure whether you are really learning what you need to know in the most effective manner.

In fact, practicals and laboratory sessions involve 'learning by doing.' They should complement your reading and help you to understand and apply the theory. Try as much as possible to decide ahead of time what you need to get out of each session, and to know what you're doing and why.

A lot of your time will be spent in the Anatomy lab and much of the scheduled Anatomy teaching will be multi modal. To get the most out of these sessions you must be well prepared. It is not enough just to 'show up'. You will need to do quite a lot of self-study to learn what you need to know, as the lectures are mainly introductory

Try to work systematically, from lecture notes or dissecting guides. By working in a group and asking your tutors and demonstrators to point out things or to clarify anything that is confusing, you should be able to cover your learning objectives, through the application of many modalities - models, cadaver demonstration, live anatomy, imaging methods, etc.

Studying on your own

As a medical student in the new curriculum self-study will be an important part of your learning. To get the most out of this, you need to do some preparation. Decide how long you can devote to each study period, and what amount of material to cover. Set limits for yourself and break large areas down into several smaller ones that can be covered in your available time slots. Initially, browse through the written material rapidly getting a general feel for the topic. Always take a few minutes to note down what you already know about the subject and define specific learning goals or questions to be answered during the study session.

Getting the most from your reading

A lot of time will be devoted to reading — books and articles and, increasingly, material from the Internet. To make sure your reading is efficient, you must know why you are reading a particular piece. Quickly skim through the paragraphs to decide whether it's really worth reading in depth. Make notes in your own words and jot down the source of new information for later use. Stick to what is relevant based on your purpose and the learning outcomes you have set for yourself.

Oral presentations

There will be times during the curriculum when you will be called upon to make a formal oral presentation and in some cases, these will form a part of your assessment. Presentation skills are an important area of communication, and have assumed an increasingly significant place in the new curriculum.

Planning the presentation

Be clear about your purpose, and how much time you will have. You should plan your presentation to include:

- A brief introduction of the topic (and yourself if relevant)
- An outline of the points you will cover
- The development of each of these points
- A summary and brief discussion
- Time for questions

In other words, tell your audience what you are going to tell them, tell them, then tell them what you told them!

Try not to include too many points – (maybe about 3 or 4 main headings.) The most common mistake is to overestimate how much material you can cover in the available time. Rehearse your talk with friends or colleagues, asking them to time you and to pay attention to your voice and speed of delivery. Remember that things often take longer in the formal setting and you do not want to have to rush your presentation.

Using notes

Try not to read from notes. If you need a crutch for your memory, list your main points on index cards and number the cards to avoid 'getting lost' in the middle of your presentation.

Visual aids

Visual aids may help your audience to follow and retain information more easily but be careful because over-use of visuals can distract the audience from the content of your presentation. The key principle when designing visual aids is to keep them simple and uncluttered. A good rule is not to have more than 5 lines of text on each visual.

Speaking

Try to make eye contact with your audience from time to time. This keeps you 'with' your audience and keeps your audience with you. Don't stare down at your notes all the time. Instead try to make occasional 'sweeps' of the audience with your eyes.

Avoid jargon as far as possible. If technical language is required, define the terms you use.

Plan time for taking questions and try to anticipate what questions might be asked, so you can prepare your answers.

Examinations

Although there will be more emphasis on continuing assessment in the new curriculum, than before, you will still be required to sit important university examinations. These examinations are aimed at ensuring that your level of knowledge and your competency in the skills required for the practice of medicine are adequate.

Although the new examinations may contain questions about medical ethics and professional conduct, most of the important 'testing' of attitudes and behaviour takes place during your courses. Much of the detail about these will be provided to you later, but there is some general information about

examinations in the Faculty that you should be aware of from now.

The Faculty carries out a meticulous process of marking aimed at ensuring fairness to all candidates. In addition to internal examiners approved and appointed by the University, all university examinations require the appointment of an external examiner from another university outside of the region. The purpose of this examiner is not only to ensure fairness to the candidates, but to provide an external review of the standards of teaching and the process of assessment in the Faculty. This examiner is involved in the setting and marking of written papers and may participate in the process of oral, practical or clinical examination of some candidates.

All written papers in University examinations in the Faculty are marked by more than one examiner (often two or three). Where there is disagreement, a more senior examiner from another campus may be asked to review the scripts. In addition, the external examiner reviews the papers of all students who, in the opinion of the internal examiners, have not achieved a satisfactory standard and also those who have attained honours or distinction grades.
In the same way, in your oral, practical and clinical examinations, you will always be examined by more than one internal examiner and the external examiner may also participate in your examination as an examiner or as an observer.

Here is some general advice to help you to cope with the pressure of examinations.

For all examinations

- Arrive in good time
- Make sure you have all necessary equipment
- Read the question or listen to the instructions carefully and answer what is asked
- In written exams, budget your time between questions
- Write legibly and grammatically
- Allow enough time to read through your answers
- If you feel yourself getting 'spaced out', take a minute's break to clear your head.
- Relax!

A note on oral examinations

The word "viva" often produces feelings of panic in medical students but this really need not be so. It is true that the 'viva voce" (oral) examination is sometimes used for borderline candidates to allow them another chance to avoid resits but it may also be used for candidates with high grades to decide on the award of Honours or Distinctions, although it is being used much less than in the past.

In some university's oral examinations, the candidate faces a panel of 2 or 3 examiners which may include an external examiner from another institution. Each examiner has a fixed time (usually between 5 and 10 minutes) to question you on a particular subject. If you appear to know the subject asked, examiners may quickly move to another area to test your breadth of knowledge. A buzzer sounds to indicate when 'time is up'.

Vivas are your chance to show what you know and improve on your existing grade. Believe it or not, the examiners want you to pass, and certainly aren't 'out to get you.' Use the viva where it is still a feature of an exam as an opportunity to prove yourself and what you know.

Some advice about sitting orals

- Listen carefully, and wait until the examiner has finished before starting your answer.
- If you don't understand the question, say so. The examiner will usually re-word it, so that it will become clear.
- Pause for a moment before answering so that you can give your best response.
- If you realize you've made a mistake, say so and correct yourself.
- If you don't know, admit it and don't 'brimble.' If you decide to 'guess', begin by admitting that you're not sure. (A doctor who doesn't know something but admits it and does something about it, is still safer than one who guesses about things that affect their patients' lives!)
- Speak confidently: sounding confident is important in medicine - your patients need to have faith in you.
- Look confident: body language says something. Sit back, place your hands in your lap, and look the examiners in the eye!
- Relax! They haven't killed anyone yet.

Coping with Stress

You will not be able to learn effectively if you are not functioning well physically and mentally. Although a little bit of circulating adrenaline can help you concentrate, getting stressed out will affect your performance. Try to make sure that you allow yourself some free time each day. Some form of regular physical activity will aid your learning and make you more mentally alert.

THIS IS KEY - EXERCISE IMPROVES YOUR MENTAL FUNCTION, MAKES YOU FEEL BETTER AND LOOK BETTER, IMPROVES YOUR RESISTANCE TO INFECTION AND IS AN INVESTMENT FOR LIFE!

At this stage, avoid working until the early hours of the morning. Getting a good night's sleep is crucial to keeping your mind functioning well. Trying to study when short of sleep is a total waste of time! Eating regularly is not always easy but aim for a balanced diet. Try to avoid stimulants and if you need a snack, go for healthy options.

Work steadily and avoid the last minute stress of cramming for examinations. This means planning your study and review in advance. Try to cover all the material at least once and avoid learning some things in depth while not covering others at all. Find out as much about the exam as possible, so you know what to expect and practice answering past papers. Think positive! Being accepted into medical school may be seen as a great privilege, but this is a tough course and there will be times when you wonder why you're here.

The workload, the stress and the uncertainty don't get any less with time. They are in some ways almost characteristic of a career in Medicine. What's important is that you learn from now how to manage the heavy workload, deal with stress, cope with uncertainty, and still achieve a balance between work and relaxation.

One of the biggest mistakes you can make is to think that you're the only one with difficulties, and that everyone else 'has it covered.' There are a hundred others in your year going through the same thing. It's not until you really start talking honestly with people that you begin to realize that they're having problems too.

Just remember that it's OK not to be on top of the world all the time -that's normal, it's healthy. But it's not always fun. Yes, the workload's heavy; the hours are long and there are sacrifices but never forget that at the end of the day, this is a special programme, and it takes a special person to do it well.

When and where to go for help

Although the Faculty does provide support systems which you can use, it is important that you keep an eye on your own welfare, and also that of your friends and colleagues. You are not a machine: you will have bad days and even bad weeks; things won't always work out, but whatever happens, your own physical and mental health should come first. Build your own peer support systems. Sometimes it helps just to have someone you can talk to a colleague or a mentor.

The important thing is to seek help as soon as you feel you might need it, and to let someone in the Faculty know as soon as possible. Do not wait until the situation is out of hand. You never know when you might need someone to speak for you, and mitigating circumstances are usually taken into account when 'borderline' grades are being reviewed.

Academic Advisors

As you will learn during orientation week, the Faculty has assigned a member of the teaching staff to each of you to serve as your Academic Advisor or Mentor. Please ensure that you know who that person is and how they can be contacted. It is suggested that you make an appointment to see your academic advisor early on in your course. You do not need to be experiencing a problem to make that first contact. Some Advisors will make early arrangements to see students assigned to them; either individually or in a small group but you need not wait for an invitation.

The system of Academic Advisors is meant to provide one route for offering academic, personal and professional support and does not exclude other systems of student counselling nor the possibility of students approaching other members of the teaching staff for advice and assistance. The system is not perfect and your relationship with your advisor will only be as good as the effort you put into making it work. Your advisor is really your first port of call if you're looking for help or advice, or need to share a problem and it need not be on a strictly academic matter. Your advisor won't always be able to offer a solution but they should know where to send you and it's important that someone in the Faculty knows you by name, and knows early on if you're having any kind of personal or academic difficulty.

Immunisation

In addition to the certificate of fitness that you were required to submit with your application, all medical students must have documented up-to-date immunization against common communicable diseases. These include tetanus, poliomyelitis, diphtheria, whooping cough, measles, mumps, German measles, Hepatitis B and tuberculosis. If you have never had chicken pox, you should also inquire about receiving a vaccination against chicken pox.
Arrangements for immunization can be made through the Student Health Clinic on Campus or at the staff clinic at the Queen Elizabeth Hospital. Students with incomplete or inadequate immunizations will not normally be allowed to proceed to year 3 clinical rotations.

Medical Certificates of Illness

We hope that you remain well throughout your programme of studies. However, if you do get ill, we recommend that you seek medical attention early. If you are ill for more than two days and if the illness causes you to miss classes, laboratory sessions or any other compulsory duties, you must submit a medical certificate as proof of illness from the University Health Service or general practitioner to the course supervisor or to a Head of Department under whom

you are working at the time. Keep a photocopy of the certificate for your personal records.

If for any reason you are unable to go to a doctor at the University Health Service, another doctor may provide the necessary certificate, but that doctor must inform the Director of the University Health Service that he/she is doing so.

If you are ill during an examination or in the days immediately preceding an examination, you must submit a medical certificate as proof of illness either to the course supervisor or to a Head of Department under whom you are working at the time, preferably on or before the day of the examination. Keep a photocopy of the certificate for your own records. Failure to submit a medical certificate under these circumstances will mean that the illness will not be considered in assessing your performance in the examination.

Serious communicable diseases

If you have any reason to believe that you have been exposed to a serious communicable disease you must seek and follow professional advice without delay to find out whether you should undergo testing and, if so, which tests are appropriate.

If you know that you have a serious communicable disease you must immediately seek and follow confidential professional advice. The staff at the Student Health Clinic is available and suitably qualified to give confidential advice and assistance. Medical practitioners at the Queen Elizabeth Hospital and private practitioners outside of the University are also available to you. It is important for you to know that:

- University regulations protect students and staff from discrimination on grounds of illness.
- You must not rely on your own assessment of the risks you pose to patients.
- If you have a serious communicable disease, for you to continue your studies and your practical work, you must have appropriate medical supervision.
- When you qualify and apply for a job, you must complete health questionnaires honestly and fully.

Identification Cards and Name Tags

Each student must have a valid personal identification card in order to have access to the facilities of the University.

Nametags should be worn when attending classes and ward rounds and when carrying out official duties.

Dress Codes

In our curriculum, you may be in contact with patients from as early as the first year. The public has expectations of a doctor and, in these circumstances, you will be regarded as a member of the health care team. It is important therefore that you dress (and behave) at all times in a manner which will identify you as a member of the profession and allow patients to feel comfortable in your presence.

An official dress code, which includes the wearing of nametags and IDs, has been developed jointly by the Medical Students' Association (MSA) and the Faculty Administration for clinical training. The details of this, which includes the wearing of a UWI identifiable white coat on 'clinical' attachments, can be obtained from the Student Affairs Section of the Dean's Office or from the MSA executive.

You are required to adhere to this code. Whether attending lectures or visiting patients, you should always appear neat and tidy, wearing reasonably smart, appropriate and professional looking clothing. You must not look as if you are going to a party, night club or to hang out on holiday! Being a medical student should always be a matter of pride to you. You must look, at a glance, like a health professional!

Attendance

Any candidate who has been absent from the University for a period of time during the teaching of a particular course for any reason other than illness or whose attendance at prescribed lectures, classes, practical classes, tutorials or clinical instructions is inadequate, may be debarred by Academic Board, on the recommendation of the Faculty Board, from taking any University examinations. Students whose attendance is unsatisfactory will be counselled, attendance noted in student files and recommendations may be made for debarment from Examinations.

Attendance Policy:

Students are expected to maintain an 80% attendance record in all courses and clerkships.

Note that excuses for absence will only be considered in cases of certified illness or exceptional circumstances. It is to your advantage to attend all lectures, laboratory sessions, ward rounds, field trips and other teaching/learning activities. In certain courses and clinical clerkships, it is mandatory for you to attend a fixed proportion of classes as a requirement for passing the course or the clerkship. Remember, lectures and tutorials are about addressing the important and clinically relevant material that is often not found in textbooks. Clinical experience at the bedside on the wards and during on-call hours provides the most effective learning tool for becoming a safe and capable doctor.

As Sir William Osler said "To study medicine without books is to sail an un-chartered sea, but to study medicine without patients is not to go to sea at all!"
It is very important that students who are doing remedial courses seek and follow all instructions concerning requirements for attending remedial sessions prior to the repeat examinations.

LABORATORY REGULATIONS

1. Always wear a lab coat during the practical sessions; remove the lab coat if you leave the laboratory for any purpose.

2. No eating (includes chewing gum, mints, lozenges, sweets etc.), drinking or application of cosmetics in labs.

3. No open-toed footwear in the laboratory.

4. Ensure you know the locations of the nearest fire exit, fire extinguisher, eyewash stations, first aid boxes within the lab.

5. Always wear safety glasses for handling hazardous chemicals as instructed.

6. handling hazardous chemicals or if you have a cut (including paper cuts) or wound on your hand. Cover cuts/wounds with a plaster.

7. Report immediately any spillage of chemicals or breakages to the person in charge.

8. Do not put broken glass pipette tips or needles in the normal waste – use the SHARPS disposable bins provided; dispose of chemicals in a safe manner as instructed and place all waste materials in the appropriate assigned containers at the end of the lab sessions.

9. Switch off all electrical equipment and gas burners when you are finished.

10. In the case of a fire drill, switch off all electrical and Bunsen burners and exit in an orderly manner.

11. **USE OF CELL PHONES IN THE LABORATORY IS PROHIBITED.**

PROFESSIONAL ETIQUETTE

General Deportment
Every student in the Faculty of Medical Sciences is expected to carry himself or herself with the dignity and integrity befitting the profession that you represent. This applies both within and outside of the Medical School and the Hospital or clinic environment.

Confidentiality
In the course of your duties, patients will inevitably share personal information with you. Patients have a right to expect that you will not disclose any such information, unless the patient gives you explicit permission to do so. Without assurances about confidentiality, patients may be reluctant to give medical students the information they need to understand how to provide good care. Moreover, the reputation of the health profession may be tarnished by un-confidential behaviour of any of its members. For these reasons:

- When you are privy to confidential information, you must make sure that the information is effectively protected against improper disclosure when it is stored, transmitted, received or otherwise disposed of;
- When a patient gives consent to disclosure of information about him or her, you must make sure that the person understands what will be disclosed, the reasons for the disclosure and the likely consequences;
- You must make sure that patients are informed whenever information about them is likely to be disclosed to others involved in their health care, and that they have the opportunity to withhold permission, where appropriate;
  - You must respect requests by patients that information should not be disclosed to third parties, save in defined exceptional circumstances (for example, where the health or safety of others would otherwise be at serious risk);
  If you disclose confidential information you should release only as much information as is necessary for the purpose;
- If in doubt about the practice of confidentiality, do not hesitate to discuss the matter with one of your Lecturers or with another professional person.

APPENDIX I

THE MBBS GRADUATE

On satisfactory completion of the programme, MB BS graduates should have acquired a core of knowledge, competencies and behaviours which will enable them to:

Patient Care

- Apply relevant knowledge from the biomedical and behavioural sciences to the care of individuals, families and groups in community and hospital settings.
- Assess the health status of individuals and groups through observation and data collection from sources including
- The medical history
- Clinical examination
- Laboratory findings
- Make a clinical diagnosis
- Prepare a plan of management including appropriate referral
- Implement a plan of management including referral
- Involve the patient and family in the care plan
- Perform simple clinical procedures
- Prepare clear and concise records, reports, letters of referral and other patient related documents.
- Distinguish between urgent and non-urgent cases.
- Demonstrate competence in the initial management of medical emergencies

Community Awareness

- Plan, and/or engage in health promotion activities aimed at promoting healthy life styles in individuals and communities
- Empower individuals, families and communities to develop self-reliance regarding their own health care
- Apply the principles of public health and an awareness of the social impact of illness to the practice of medicine in the community

Communication & Collaboration

- Communicate effectively with patients, families, and other members of the health team.
- Collaborate with individuals and communities in identifying and achieving defined health goals.
- Function harmoniously and constructively as a member of a multi-disciplinary team within the health sector and between the health sector and other sectors of society.
- Participate willingly in the training of other health care workers.

Health Services Management

- Participate in planning, organising, directing and evaluating heath care
- Engage in quality assurance initiatives
- Participate in health care research

Personal Development

- Demonstrate a sensitivity and respect for the rights of individuals and groups.
- Practice medicine within the ambit of professional medical ethics and the law.
- Keep abreast of social, medical and technological advances through participation in continuing medical education
- Critically appraise the published scientific literature
- Be accountable for his/her own actions in the care of patients

APPENDIX II

GRADUATE DEGREES

Higher degrees offered by the Faculty of Medical Sciences currently are:

Certificate in Public Health
Master's in Public Health
MPhil/PhD Public Health
MPhil /PhD Epidemiology
MPhil /PhD Medical Microbiology
MPhil /PhD Immunology
MPhil /PhD Pharmacology

DM Anaesthesia & Intensive Care
DM Accident and Emergency Medicine
Diploma, MSC, DM Family Medicine
DM Internal Medicine
DM Obstetrics and Gynaecology
DM Orthopaedics
DM Ophthalmology
DM Paediatrics
DM Psychiatry
DM Surgery (General)

Full details of higher degree programmes in this Faculty are available in the Graduate Information Guide for Medical Sciences, from the Faculty of Medical Sciences or the School for Graduate Studies and Research
http://www.cavehill.uwi.edu/gradstudies/home.aspx

BACHELOR OF HEALTH SCIENCES

PROGRAMME DESCRIPTION AND REGULATIONS, FMS, UWI, CAVE HILL

PROGRAMME COORDINATOR – DR. ROGER SEALY

OVERVIEW

The Bachelor of Health Sciences programme trains and develops professionals to establish careers in health education and administration. These professionals may occupy roles in the management of healthcare facilities using science and technology to aid in diagnosis, education, forensics and treatment of persons. The following concentration areas are currently offered in the programme:

- Community Health
- Biomedicine, Ethics, Humanities & Society
- Healthcare Administration & Management
- Nutrition and Society
- Environmental Health
- Health Informatics

Potential employers are insurance companies, hospitals, long-term care facilities, public health agencies, outpatient facilities (polyclinics), medical doctors' offices and health related NGOs.

The programme is developed around an integrated core of biomedical disciplines. From these core subjects, students would learn the fundamental concepts of the basic medical sciences and their applications to the health sciences, for a better understanding of the scientific basis of health related problems. Students will also be able to use the knowledge gained from the core subjects as a foundation for more detailed study of each concentration.

Throughout the degree programme, the materials in the core subjects and concentrations will be offered as courses with specific credit values. Three (3) credit courses are offered on a semester basis, while six (6) credit courses including the research project extend over two semesters. The biomedical core courses are compulsory for all students and most of these will be taken in the first to the second year of the programme. Also, during the second year of the programme, students would be introduced to research by completing the Health Science Research course. The programme gives students the flexibility to focus on a specific concentration in the health sciences by selecting courses in level two and three from other faculties along with electives. In addition to the flexible concentration courses and the core courses, each student is required to do three Faculty-assigned foundation courses (value three (3) credits per course).

N.B. Each credit earned is equal to successful completion by examination of course materials covered over a period of 13 hours in one semester.

COURSE DELIVERY

Presentation of the core and concentration courses will be done by one or a combination of the following:

1. Lectures
2. Laboratory exercises
3. Tutorials
4. Seminars
5. Research projects

RATE OF PROGRESS

In any one semester, students must register for courses totaling a minimum of 9 and a maximum of 21 credits.
By the end of the third year, each full-time student is expected to have successfully completed **at least 96 credits**, of which a minimum of 51 credits **must** be in a given concentration. Candidates who satisfy these requirements will be eligible for the award of the degree.

Time limits for completion and enforced withdrawals

1. A candidate taking examinations in either the core or concentration courses will normally be required to withdraw from the programme, if the candidate is carrying a GPA below 2.0 for two consecutive semesters.

2. Candidates shall complete the degree (including the foundation courses) in a minimum of six (6) or a maximum of fourteen (14) semesters.
3. Candidates who do not satisfy the credit requirements for the degree within the maximum time will normally be required to withdraw from the programme. However, if the candidate has exhausted the maximum

time limit with a deficit of no more than 6 credits for completion of the degree requirement, the Dean may recommend to Academic Board (after consultation with the Programme Director) an extension of the period of study by one or two semesters.

4. The pass mark for all courses is 50% and the programme will be delivered under the University's current GPA system implemented August 2014.

Re-admission to the programme after enforced withdrawal

Candidates, who have had to withdraw from the programme due to academic performance, may re-apply for admission after one year of separation.

N.B. Transfers from this degree programme to the MB BS programme will not be considered.

SPECIFIC OBJECTIVES

- To provide a pool of graduates that is suitable to undertake research in the cross disciplinary health science fields.
- To provide the graduate with the foundation for further training in research targeted at applied and cross disciplinary health related niche specialties.
- To provide the graduate with the appropriate level of knowledge and expertise to deliver services for health and relevant cross disciplinary investigations.
- To equip graduates to perform quality control services for health related industries.
- To train graduates who can function as scientific officers in health and environmental related agencies.

INFORMATION ABOUT CONCENTRATIONS

Community Health

This concentration is a sub-discipline of Public Health which addresses the study and improvement of the health characteristics of biological communities. The community health concentration introduces the student to concepts of health in the geographical setting by emphasizing the social, psychological, physical, mental, environmental and ethical components of health among inhabitants of communities.

Biomedicine, Ethics, Humanities & Society

This concentration introduces students to the ethical and philosophical views of health in today's society. It starts with a foundation in understanding the history of biomedicine in our society and the ethical issues that can arise in biomedical settings. It will also provide an opportunity for students to reflect on how societal developments have led to specific kinds of ethical concerns, and how different groups in society have been, and continue to be affected by differential treatment in science and medicine.

Healthcare Administration & Management

This concentration provides students with important aspects of the health sciences which would develop their ability to function as effective managers of health care facilities. The core health related courses are complemented by courses in cost and management accounting, microeconomics, human resource management, business law, organisational behaviour and management information systems.

Environmental Health

This concentration explores environmental issues and its association with and impact on health. The environment and people within that space are mutually connected. Alongside the core health related courses, you will learn about environmental determinants of disease and factors (natural and man-made) which may affect the environment. The concentration will also discuss the modalities for the monitoring and surveillance of environmental hazards.

Health Informatics

This concentration offers the opportunity to undertake a learning experience geared toward the use of health care. The concentration compliments the core health disciplines with courses covering relevant areas in computer science, information science, social sciences and management sciences. It deals with the resources, devices, and methods required to optimise the acquisition, storage, retrieval and use of information in health. These individuals can move on to specialize at the graduate

level in Health Information Technology and related areas.

CAREER PATH AND OPTIONS

Overall, graduates with this degree will have several career options in industry, government and academia.

Community Health

Bachelor of Health Sciences graduates who specialise in Community Health may move on to careers including health promotion, research and also careers addressing health policy implementation in government ministries. These individuals can also specialise at the graduate level in Public Health.

Biomedicine, Ethics, Humanities & Society

Bachelor of Health Sciences graduates who specialise in Biomedicine, Ethics, Humanities and Society may move on to careers including positions in institutional review boards or may pursue careers in health policy; health administration and biomedical research. These individuals can go on to specialise in biomedical ethics at the graduate level.

Healthcare Administration & Management

Bachelor of Health Sciences graduates who specialise in Healthcare Administration & Management may move on to careers managing healthcare facilities such as hospitals, polyclinics and private healthcare institutions. These individuals can also specialise at the graduate level in Business Administration.

Nutrition & Society

Bachelor of Health Sciences graduates who specialise in Nutrition may move on to careers in health promotion and also work along with dieticians and nutritionists in establishing nutrition interventions for managing diseases and for preventative measures. These individuals can also specialise at the graduate level in Nutrition.

Environmental Health

Bachelor of Health Sciences graduates who specialise in Environmental Health can work as environmental officers in government and NGO entities. After the programme individuals can specialise in Public Health and/or Environmental Risk Management.

Health Informatics

Bachelor of Health Science graduates who specialise in Health Informatics can move on to specialize at the graduate level in Health Information Technology and related areas. These persons may consider working in healthcare institutions to establish and maintain information technology systems within the organization to facilitate in patient care.

DURATION OF THE PROGRAMME

Three (3) years of full-time study. Seven (7) years of part-time study.

QUALIFICATIONS FOR ADMISSION

Students seeking admission to the degree programme must fulfill the following normal matriculation requirements:

a) CXC Certificates, General Certificates of Education (GCE)

Holders of the Caribbean Examinations Council (CXC) Certificates and/or Caribbean Secondary Education Certificate (CSEC), General Certificates of Education (GCE), Caribbean Advanced Proficiency Examination (CAPE) (or the approved equivalents in Matriculation Regulation)

- CSEC subjects/ GCE O' level
    - Mathematics, English Language, Biology, Chemistry & Physics
- CAPE/ GCE A' Level (a minimum of two subjects)
    - Biology/Zoology & Chemistry and a non-science subject
- Associate degree, diploma(s) and certificate(s) from other health science programmes at a reputable institution will be also considered for entry.
    - Exemptions with credits may be granted.
- Relevant work experience may be considered for matriculation.

FOR students writing CAPE, candidates who have passed two 2-unit courses in a particular subject area fall within the two (2) A Level/CAPE subject,

matriculation standing. Six (6) Caribbean Advanced Proficiency examinations (CAPE) Units, including the two single-unit courses - Caribbean Studies and Communication Studies are required for normal matriculation;

Entry Requirements

Candidates must also satisfy ONE (1) of the following requirements (A, B or C):

A. i) GCE O'levels (grades A to C)/CXC/CSEC General Proficiency level (grades 1 & 2 pre 1998; grades 1 to 3 from 1998) in English Language, Mathematics, Biology, Chemistry and Physics

ii) GCE A'Levels / CAPE (2 units per subject): a minimum of two subjects chosen from Chemistry, Biology/ Zoology and a non-science subject

OR

UWI, Preliminary Faculty of Science & Technology Courses (N1): Chemistry & Life Sciences

B. Equivalent qualifications (as determined from transcripts) to those above.

C. Mature students (≥ 21 years) with Associate degrees, diplomas and certificates in health related sciences inclusive of the GCE O' level/CXC/CSEC requirements stated above at A (i) and relevant work experience in a research/medical setting.

Programme Concentrations

Bachelor of Health Sciences (Concentration- Community Health

Level I

Semester 1

HESC1000 Structure & Function 1 - Cells & Tissues
HESC1005 Health Care Systems
HIST2610 Health and Medicine in the Caribbean: A Historical Perspective
SOWK3031 Biosocial Psychosocial Challenges of HIV/AIDS in the Caribbean
SOCI2022 Social Gerontology
PSYC2012 Development Psychology

Semester 2

HESC3000 Biological Principles of Prevention and Treatment
PHIL1002 Introduction to Ethics & Applied Ethics

Semester 2

HESC1000 Structure & Function 1 - Cells & Tissues
HESC1005 Health Care Systems
SOCI1002 Introduction to Sociology I
EDSC1200 Introduction to Health Education Pedagogy
PSYC1004 Introduction to Social Psychology

Level II

Semester 1

HESC2000 Structure & Function 2 - Organ Systems
HESC2001 Essential Pathophysiology
HESC1010 Fundamentals of Nutrition
HESC2002 Human Development & Behaviour
MGMT1001 Principles of Management
SOCI3027 Gender and Development

Semester 2

HESC2000 Structure & Function 2 - Organ Systems
HESC2001 Essential Pathophysiology
HESC2003 Health Science Research
PHIL3120 Biomedical Ethics

Level III

Semester 1

HESC3000 Biological Principles of Prevention and Treatment
SOWK3000 Social Work Supervised Research Study
or MDSC3900 Practical Research for Health and Medical Students
HESC3005 Statistics for Public Health

Plus 1 elective from

HESC3011 Management of Health Services
HESC3003 Environmental Health
SOCI3037 Social Dimensions of Inequality and Marginalisation

SOWK3000 Social Work Supervised Research Study or
MDSC3900 Practical Research for Health and Medical Students
HESC3010 Technology Applications in Health Care
PSYC2002 Abnormal Psychology
PSYC3003 Community and Environmental Psychology

Plus 1 elective from

SOCI 3013 Caribbean Social Policy
SOCI3033 Drugs & Society
SOCI2028 Violence & Development
SOWK2007 Disability Studies
SOWK3034 Children and Family Services
SOWK4005 Crisis Intervention
MDSC3002 Epidemiology I

Bachelor in Health Sciences Concentration – Humanities/Biomedicine, Ethics and Society

Level I

Semester 1

HESC1000 Structure & Function 1 – Cells & Tissues
HESC1005 Health Care Systems
HIST2610 Health and Medicine in the Caribbean A Historical Perspective
PHIL1002 Introduction to Ethics & Applied Ethics

Semester 2

HESC1000 Structure & Function 1–Cells & Tissues
HESC1005 Health Care Systems
SOCI1002 Introduction to Sociology I
EDSC1200 Introduction to Health Education Pedagogy
PSYC1004 Introduction to Social Psychology

Level II

Semester 1

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC1010 Fundamentals of Nutrition
HESC2002 Human Development & Behaviour
SOCI2022 Social Gerontology

Semester 2

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC2003 Health Science Research
PHIL3120 Biomedical Ethics
SOCI3027 Gender and Development

Level III

Semester 1

MDSC3000 Biological Principles of Prevention and Treatment
PHIL3099 Research in Philosophy or MDSC 3900 Practical Research for Health and Medical Students
PHIL3500 Philosophy and Gender
PHIL3110 Environmental Ethics

Plus 1 elective from

PHIL2200 Crime and Punishment – Issues in Legal Justice
SOCI3037 Social Dimensions of Inequality and Marginalisation
HIST3030 The Evolution of Social Policy in Barbados
PHIL3510 Philosophy of Sex & Love
SOWK3031 Biosocial Psychosocial Challenges of HIV/AIDS in the Caribbean Barbados

Semester 2

HESC3000 Biological Principles of Prevention and Treatment
PHIL3099 Research in Philosophy or MDSC3900 Practical Research for Health and Medical Students
HIST 3033 Race, Gender and Medicine
MDSC2011 Technology Applications in Healthcare

Plus 1 elective from

PHIL2210 Human Nature and the Good Life in Society

Bachelor of Health Sciences Concentration in Health Care Administration and Management

Level I

Semester 1

HESC1000 Structure & Function 1 – Cells & Tissues
HESC1005 Health Care Systems
HIST2610 Health and Medicine in the Caribbean: A Historical Perspective
ECON1003 Maths for Social Sciences I

Semester 2

HESC1000 Structure & Function 1– Cells & Tissues
HESC1005 Health Care Systems
PHIL3120 Biomedical Ethics
EDSC1200 Introduction to Health Education Pedagogy

PSYC1004 Introduction to Social Psychology

Level II

Semester 1

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC1010 Fundamentals of Nutrition
HESC2002 Human Development & Behaviour
MGMT1001 Introduction to Management

Semester 2

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC2001 Health Science Research
ACCT1003 Introduction to Cost & Management Accounting
ECON1001 Introduction to Microeconomics

Level III

Semester 1

HESC3000 Biological Principles of Prevention and Treatment
SOWK3000 Social Work Supervised Research Study or MDSC3900 Practical Research for Health and Medical Students
HESC3011 Management of Health Services
MGMT2008 Organisational Behaviour

Plus 1 elective from

MGMT2021 Business Law
MGMT2023 Financial Management

Semester 2

HESC3000 Biological Principles of Prevention and Treatment
SOWK3000 Social Work Supervised Research Study or MDSC3900 Practical Research for Health and Medical Students
MGMT2006 Management Information Systems I

ECON3057 Health Economics

Plus 1 elective from

MDSC2011 Technology Applications in Healthcare
MKTG2001 Principles of Marketing
MGMT3017 Human Resource Management
MGMT3034 Managerial Communications
SOWK4005 Crisis Intervention
PSYC2012 Development Psychology

Bachelor in Health Sciences Concentration in Nutrition and Society

Level I

Semester 1

HESC1000 Structure & Function 1 – Cells & Tissues
HESC1005 Heath Care Systems
HIST2610 Health and Medicine in the Caribbean: A Historical Perspective
PHIL1002 Introduction to Ethics & Applied Ethics

Semester 2

HESC1000 Structure & Function 1–Cells & Tissues
HESC1005 Health Care Systems
SOCI1002 Introduction to Sociology I
EDSC1200 Introduction to Health Education Pedagogy
PSYC1004 Introduction to Social Psychology

Level II

Semester 1

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC1010 Fundamentals of Nutrition
HESC2002 Human Development & Behaviour
SOCI3027 Gender and Development

Semester 2

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC2003 Health Science Research
PHIL3120 Biomedical Ethics
HESC3007 Nutrition throughout the Life Cycle

Level III

Semester 1

HESC3000 Biological Principles of Prevention and Treatment
SOWK3000 Social Work Supervised Research Study or MDSC3900 Practical Research for Health and Medical Students
HESC2004 Nutrition for Today
HESC3004 Nutrition and Metabolism

Plus 1 elective from

SOCI3037 Social Dimensions of Inequality and Marginalisation
PSYC2012 Development Psychology

Semester 2

MDSC3000 Biological Principles of Prevention and Treatment
SOWK3000 Social Work Supervised Research Study or
MDSC3900 Practical Research for Health and Medical Students
HESC3001 Nutrition Education
HESC3006 Nutrition in the Prevention and Treatment of Disease

Plus 1 elective from

HESC3010 Technology Applications in Healthcare
PSYC3003 Community & Environmental Psychology
SOCI2022 Social Gerontology
SOCI3033 Drugs & Society
SOWK2007 Disability Studies

Bachelor in Health Sciences Concentration in Environmental Health

Semester I

HESC1000 Structure & Function 1 - Cells & Tissues
HESC1005 Health Care Systems
HIST2610 Health and Medicine in the Caribbean: A Historical Perspective
BIOL1025 Diversity of Life II
CHEM1125 Introduction to Experimental Chemistry

Semester 2

HESC1000 Structure & Function 1 - Cells & Tissues
HESC1005 Health Care Systems
PSYC1004 Introduction to Social Psychology
EDSC1200 Introduction to Health Education
CHEM1125 Introduction to Experimental Chemistry

Level II

Semester 1

HESC2000 Structure & Function 2 - Organ Systems
HESC2001 Essential Pathophysiology
HESC1010 Fundamentals of Nutrition
HESC2002 Human Development & Behaviour
MICR2252 General Microbiology or equivalent

Semester 2

HESC2000 Structure & Function 2 - Organ Systems
HESC2001 Essential Pathophysiology
HESC2003 Health Science Research
PHIL3120 Biomedical Ethics
CHEM2725 Chemistry of the Environment

Level III

Semester 1

HESC3000 Biological Principles of Prevention and Treatment
HESC3003 Environmental Health
PHIL3110 Environmental Ethics
CHEM3218 Environmental Chemistry and Toxicology
MDSC3900 Practical Research for Medical and Health Sciences

Plus 1 elective

HESC3011 Management of Health Services
HESC3005 Statistics for Public Health

Semester 2

HESC3000 Biological Principles of Prevention and Treatment
MDSC3900 Practical Research for Medical and Health Sciences
MICR3258 Pathogenic Microorganisms or equivalent

Plus 1 elective

LAW3450 Caribbean Environmental Law
MICR3265 Microbiology of Food
HESC3010 Technology Applications in Healthcare
HESC3002 Epidemiology I
PHIL2210 Human Nature and the Good Life in Society
PSYC3003 Community & Environmental Psychology

Bachelor in Health Sciences Concentration – Health Informatics

Level I

Semester 1

HESC1000 Structure & Function 1 – Cells & Tissues
HESC1005 Health Care Systems
MGMT1001 Introduction to Management
MGMT1000 Introduction to Computers
COMP1107 Entrepreneurship for Computer Scientists

Semester 2

HESC1000 Structure & Function 1– Cells & Tissues
HESC1005 Health Care Systems
EDSC1200 Introduction to Health Education Pedagogy
PHIL3120 Biomedical Ethics
HESC1004 Healthcare Data Analytics I (New)

Level II

Semester 1

HESC2000 Structure & Function 2 - Organ Systems
HESC2001 Essential Pathophysiology
HESC1010 Fundamentals of Nutrition
HESC2002 Human Development & Behaviour
HESC2011 Health Informatics (New)
BIOC2371 Molecular Techniques (Elective)

Semester 2

HESC2000 Structure & Function 2 – Organ Systems
HESC2001 Essential Pathophysiology
HESC2003 Health Science Research
HESC3010 Technology Applications in Healthcare
HESC2010 Database Management for Healthcare Professionals I (New)

Level III

Semester 1

HESC3000 Biological Principles of Prevention and Treatment
HESC3005 Statistics for Public Health
HESC3015 Database Management for Healthcare Professionals II (New)
HESC3008 Health Information Systems

Plus 1 elective
HESC3011 Management of Health Services
MGMT2023 Financial Management

Level III

Semester 2

HESC3000 Biological Principles of Prevention
HESC3016 Healthcare Data Analytics 2 (New)
HESC3008 Health Information Systems
HESC3012 Medical Vocabulary and Classification Systems

Plus 1 elective

MGMT3034 Managerial Communications
MGMT2006 Management Information Systems
BIOC3265 Principles of Bioinformatics

COURSE DESCRIPTIONS

LEVEL 1

COURSE CODE: HESC1000

TITLE: Structure and Function 1 (Cells & Tissues)
CREDITS: 6
SCHEDULE: YEAR 1, Semesters 1 & 2

This course introduces students to a variety of biological concepts and the basic principles of Biochemistry, Genetics, Microbiology, Molecular Biology and Cell Biology in living organisms. Content areas that will be studied include water and acid/base chemistry; DNA replication and assortment; microbial diversity; molecular techniques and tissues. Students will explore the basis of connective tissue disorders and neurological diseases and will use microscopic/histology details to form the foundation or pathological findings of the tissues and to confirm diagnosis. The course will also help in the development of various methods for rehabilitation in cases of neurological and muscular disorders.

COURSE CODE: HESC1005
TITLE: Health Care Systems
CREDITS: 6
SCHEDULE: YEAR 1, Semesters 1 & 2

This course provides students with a fundamental understanding of how local and regional health care systems function while stimulating critical thinking about practical and policy implications. There will also be a focus

on understanding the connections between various physical, social and biological factors and health outcomes. Practical examples, applications, issues and exercises requiring critical thinking and effective written presentations will be emphasized by the use of case studies in workshop sessions. Small group self-study sessions are also designed within the course to encourage independent learning among students.

COURSE CODE: HESC1010
TITLE: Fundamentals of Human Nutrition
CREDITS: 3
SCHEDULE: YEAR 2, Semesters 1

This introductory course is designed to provide students with an understanding of the basic principles of human nutrition. Essential nutrients, their properties, function, requirements, interrelatedness and metabolism will be presented via face-to-face and online modalities. Energy balance will also be included. The role of nutrition in the prevention and management of specific diseases (obesity and diabetes) will be explored.

COURSE CODE: HESC1004
TITLE: Healthcare Data Analytics I (New)
CREDITS: 3
SCHEDULE: YEAR 1, Semester 2

This course will introduce students to Big Data and generally discuss some of the historical, current and projected challenges in the healthcare field. The need for health analytics is growing and by no coincidence, driven by the continued increase in healthcare costs and the need for healthcare stakeholders to better understand how to get the most out of their budgets while making an impact on their patients and the population at large. This course will additionally seek to define big data tools, techniques and practical usages to driving meaningful results and outcomes and spur the students understanding of the power Big Data can bring to the healthcare field. Assessment will be based on a group project, labs and individual participation and testing.

LEVEL II

COURSE CODE: HESC2000
TITLE: Structure and Function 2 (Organ Systems)
CREDITS: 6
SCHEDULE: YEAR 2, Semesters 1 & 2
**Prerequisite: HESC1000 - Structure and Function 1 (Cells & Tissues)*

This course offers a basic examination of the functions of the major organs and organ systems of the human body. Students will explore how the different systems of the body are involved in performing specific tasks and how their functions are integrated. The unique role of each organ and organ system in maintaining health will be examined, and the set-point around which the physiological variables are maintained emphasized. The importance of different physiological feedback systems in maintaining human body function at rest and under various forms of stress will be discussed. Content areas of study include homeostasis and body composition; the cardiovascular system; the nervous system; endocrine and reproductive physiology; and excretion.

COURSE CODE: HESC2001
TITLE: Essential Pathophysiology
CREDITS: 6
SCHEDULE: YEAR 2, Semester 1& 2
**Prerequisite: HESC1000 - Structure and Function 1 (Cells & Tissues)*
***Co-requisite: HESC2000 - Structure and Function 2 (Organ Systems)*

This course provides an overview of common clinical disorders and the cellular, molecular and environmental mechanisms that govern the pathogenesis and presentation of these diseases. Students will examine the basic concepts and fundamental principles of human disease, namely the general mechanisms of disease pathogenesis, as well as the clinical manifestation of common diseases of the major organ systems, including the cardiovascular, respiratory, gastrointestinal and endocrine systems. An invaluable foundation for further studies will be laid for undergraduate students who are interested in pursuing careers in healthcare fields such as Medicine, Nursing, Pharmaceuticals, Epidemiology and Public Health.

COURSE CODE: HESC2002
TITLE: Human Development and Behaviour
CREDITS: 3
SCHEDULE: YEAR 2, Semester 1

This technology enhanced course presents the fundamentals of human development across the life span. It familiarizes students with the principal mechanisms of behavioural development from embryology through ageing and death. Students will examine the physiological and psychological dynamics that shape human behaviour through independent study, and while working in groups. Content areas that will be addressed include basic embryology; developmental theories; the lifecycle approach to health issues; health for an ageing population; personality theories; applied cognitive psychology; and psychophysiology.

COURSE CODE: HESC2011
TITLE: Health Informatics (New)
CREDITS: 3
SCHEDULE: YEAR 2, Semester 1
**Prerequisites: MGMT1000 – Introduction to Computers, HESC1004 – Healthcare Data Analytics 1*

This course is an introduction to the health informatics discipline. Students will be exposed to the history of health data management, clinical and administrative informatics applications in healthcare organizations. Students will also be introduced to key concepts and tools that are vital to healthcare informatics including electronic health records (EHRs), legal and ethical issues, data and information, privacy and security, health information exchange (HIE), research methodologies, future trends and emerging technologies.

COURSE CODE: HESC2003
TITLE: Health Science Research
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2

This course introduces students to research methodology in health sciences. It will include specific instruction and practical learning experiences covering the literature review, study design and processes for summarising data. Students will also be exposed to techniques for health data acquisition and management. The resulting knowledge and skills that they will acquire will enable them to make evidence-based decisions about healthcare policy and practice. Topics that will be addressed in the course are: principles of epidemiology; statistics for the health sciences; interpretation of the literature; planning a research project; and funding for research. Practical examples, applications, issues and exercises requiring critical thinking and effective written presentations will be emphasized.

COURSE CODE: HESC2010
TITLE: Database Management for Healthcare Professionals I (New)
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2
**Prerequisite: MGMT1000 – Introduction to Computers*

Database processing is a critical area of competency in health informatics. This course is designed to introduce students to the basic concepts and methods of processing in a database management system (DBMS) within the context of healthcare. Topics covered include relational database model concepts such as normalization and design methodology, implementing databases, basic SQL, relations, data validation and data integrity. In practice, students will learn how to design, develop and manage database applications. The course will be delivered using a blended learning methodology and will utilize formative and summative assessment techniques to enforce the material taught.

Lectures will contain case studies for discussion and critique. In the laboratory sessions, students will learn querying techniques utilizing available database software. Students will be expected to design and implement an appropriate application

COURSE CODE: HESC2004
TITLE: Nutrition for Today
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1
Prerequisite: HESC1010 - Fundamentals of Human Nutrition

This course will expose students to nutrition from a practical perspective. Topical issues and concerns which affect today's nutrition and consequently health will be discussed. Through face-to-face and online modalities, participants will be provided with tools and skills to manage their own nutritional wellbeing. Cultural aspects of food, designing a healthy diet as well as the contribution of physical activity to health and wellness will be explored. Consumer concerns about foods will also be addressed.

COURSE CODE: HESC3010
TITLE: Technology Applications in Health Care
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2

This course will equip healthcare professionals with the knowledge, skill-sets and attitudes necessary for effective participation in the planning, design, management and use of clinical information systems. This course will enable students to conceptualise, plan and build health information infrastructure to support the dynamic changes in health care systems. Students will utilise an Academic Electronic Health Record (EHR) System comprising of a set of computer-based clinical information system applications which includes an electronic health record, to develop their confidence and competence with this type of clinical information technology in the practice of their respective profession. This is a level three (3) course which will be delivered over two (2) semesters. The course will be administered by two (2) hours of lectures and one (1) hour of a tutorial based session per week in both semesters.

LEVEL III

COURSE CODE: HESC3000
TITLE: Biological Principles of Treatment & Prevention
CREDITS: 6
SCHEDULE: YEAR 3, Semesters 1 & 2
**Prerequisite: HESC2001 - Essential Pathophysiology*

This course examines cellular and molecular concepts in disease treatment and prevention. Students will study important aspects of preventative measures such as immunisation, sterilisation and disinfection. Basic and molecular aspects of drug treatment including pharmacodynamics, pharmacokinetics and drug interactions will also be addressed. The principles of chemotherapy for antibiotics, antineoplastic and immunosuppressant agents and radiotherapy will also be discussed and the theoretical aspects of treatment and prevention will be explored. Additionally, students will be provided with an extensive practical experience that will include pharmacotherapeutic and non-pharamcotherapeutic sessions inclusive of drug action and interactions, antimicrobial screening and susceptibility, cytotoxicity assays and immunoassays.

COURSE CODE: HESC3016
TITLE: Healthcare Data Analytics 2 (New)
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2
Prerequisite: HESC1004 –Healthcare Data Analytics I

This course will dig deeper into students' knowledge of Big Data and Healthcare analytics by going over analytical solutions to common healthcare problems from a practical business problem perspective where students will build out various data structures to organize their data.

Developing better prediction models is a critical step in the pursuit of improved health care. These tools will guide students' decision-making on preventive measures, and individualized treatments. To effectively use and develop these models, students must understand them better. In this course, students will learn how to make accurate prediction tools, and how to assess their validity. First, the course will discuss the role of predictive analytics for prevention, diagnosis, and effectiveness. Then, key concepts such as study design, sample size and overfitting will be considered. Throughout the course will illustrate the concepts introduced in the lectures using R..

COURSE CODE: HESC3002
TITLE: Epidemiology I
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2

This course on Epidemiology, the core science of Public Health, presents the concepts and tools needed to assess and monitor the health of populations; investigate the causes of different health states; direct interventions to address those causes and to monitor their impact. It will provide students with a solid grounding in epidemiology as applied to Public Health. The course will be delivered by way of interactive lectures followed by laboratory sessions in which students will acquire practical working knowledge with respect to the application and the relevance of the concepts addressed in the lectures. Areas of study include the role and development of epidemiology; principles of screening as public health intervention; analytical epidemiology study designs; experimental and quasi experimental designs; and models of causation.

COURSE CODE: HESC3003
TITLE: Environmental Health
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1

This course exposes students to environment health and its association and impact on health. It is well documented that the environment and people within that space are mutually connected and affect the health of either component. The course will cover environmental determinants of disease and also factors (natural and manmade) which may affect the environment. The course will also discuss the modalities for the monitoring and surveillance of environmental hazards.

COURSE CODE: HESC3005
TITLE: Statistics for Public Health
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1

Statistics for Public Health provides a broad overview of statistical methods and concepts used in the public health sciences, emphasizing interpretation and concepts rather than calculations or mathematical details. It develops the ability to read the scientific literature to critically evaluate study designs and methods of data analysis, and it introduces basic concepts of statistical inference, including hypothesis testing, p-values, and confidence intervals.
Topics include comparisons of means and proportions; the normal distribution; regression and correlation; concepts of study design, including randomization, sample size, and power considerations; The course

draws examples of the use and abuse of statistical methods from the current biomedical literature.

COURSE CODE: HESC3015
TITLE: Database Management Systems for Healthcare Professionals II (New)
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1
**Prerequisites: HESC2010 – Database Management Systems for Healthcare Professionals I*

Database implementation, management and security are critical elements of competency in health informatics. This course is designed to introduce and build on students' knowledge of database design in order to demonstrate the concepts of implementation and methods of management effectively and efficiently in a database management system (DBMS), within the context of healthcare. Students will become familiar with database application development tools to create and enhance a complete user interface and provide for overall operational effectiveness. In theory and practice, students will understand current issues in the development of database technologies and applications and will be able to integrate applicable knowledge and technical skills into a coherent body of knowledge. Topics to be covered include advanced design and implementation skills, database administration, advanced database concepts such as transaction management, concurrency control and distributed database management systems. The course will be delivered using a blended methodology and will utilize formative and summative assessment techniques to enforce the material taught.

Lectures will contain case studies for discussion and critique. In the laboratory sessions, students will learn Visual Basic for Applications (VBA) and advanced Structured Query Language. Students will be expected to design and implement an appropriate application.

COURSE CODE: HESC3006
TITLE: Nutrition in the Prevention and Treatment of Disease
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2
**Prerequisite: HESC1010 - Fundamentals of Human Nutrition*

This course explores how nutrition can be used as a powerful means to prevent and treat diseases. An evidence -based approach will be utilized to help students study key chronic conditions which significantly affect world-wide populations. Included in these conditions will be heart disease, hypertension, stroke, cancer, diabetes, and bone disease. Disorders of the GI tract and the gut's role in immunity will also be discussed. Integrative therapies and oral supplementation will be described. Group work will feature prominently in this course.

COURSE CODE: HESC3007
TITLE: Nutrition throughout the Lifecycle
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2
**Prerequisite: HESC1010 - Fundamentals of Human Nutrition*

This course is designed to enable the understanding of nutritional needs throughout various stages of the lifecycle. Students will examine nutrition during preconception, pregnancy, lactation, infancy, childhood, adolescents, adulthood and aging. Additionally, challenges that are unique to different populations will be explored. Food security and at risk populations will be addressed and the concept of community nutrition within the context of the Caribbean will be evaluated. The twelve determinants of health will be integrated. The course will be delivered using both face-to-face and online modalities and students will engage in independent study and group work to achieve the learning outcomes.

COURSE CODE: HESC3011
TITLE: Management of Health Services
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1
**Prerequisite: HESC1005 - Health Care Systems*

This course surveys the management functions of healthcare systems. It examines the practical application of management principles to healthcare while demonstrating the differences between healthcare organizations and systems and standard businesses. By discussing and analysing practical scenarios, students will stimulate their critical thinking about the practical day-to-day management of operations, and the task of planning for healthcare in the long-, medium- and short term. There will also be a focus on understanding both up-stream and down-stream implications of decisions implemented within healthcare organizations/systems. Defining, explaining, and applying management principles related to physical flows, quality, human behaviour and evidence based decision-making will be emphasised.

COURSE CODE: MDSC3900
TITLE: Practical Research for Medical & Health Sciences
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1& 2
**Prerequisites:*
HESC2003 - Health Science Research.

This course introduces students to a practical research experience in health sciences. It will include specific instruction and practical learning experiences covering the literature review, study design and processes for

summarising data. Students will also be exposed to techniques for health data acquisition and management. The resulting knowledge and skills that they will acquire will enable them to design and execute a simple research study. Topics to be addressed in the course are: Interpretation of statistical techniques; critical appraisal and summary of the literature; planning a research project. At the end students should produce a synopsis including, background, methodology, results and interpretation of the results. Practical examples, applications, issues and exercises requiring critical thinking and effective written presentations will be emphasized.

COURSE CODE: HESC3008
TITLE: Health Information Systems
CREDITS: 6
SCHEDULE: YEAR 3, Semester 1& 2
**Prerequisites: HESC3010 Technology Applications in Health Care*

This course will equip healthcare professionals with the knowledge, skill-sets and attitudes necessary for effective participation in the planning, design, management and use of clinical information systems. This course will enable students to conceptualise, plan and build health information infrastructure to support the dynamic changes in health care systems. Students will utilise an Academic Electronic Health Record (EHR) System comprising of a set of computer-based clinical information system applications which includes an electronic health record, to develop their confidence and competence with this type of clinical information technology in the practice of their respective profession. This is a level three (3) course which will be delivered over two (2) semesters. The course will be administered by two (2) hours of lectures and one (1) hour of a tutorial based session per week in both semesters.

COURSE CODE: HESC3012
TITLE: Medical Vocabularies and Classification Systems
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2

This course introduces students to standard health care coding terminologies, vocabularies and classification systems used in healthcare delivery and management both locally and internationally. This course will place emphasis on the representation of clinical data through the use of medical vocabularies and clinical classification systems. Students will explore how healthcare vocabulary, terminology, and classification systems are vital for collection and analysis of appropriate encoded health data (manual & electronic). This course will be delivered by (2) hours of lectures and one (1) hour of a tutorial based session per week.

GRADING SCHEME

Letter Grade	Numeric Score	GPA
A+	90-100	4.3
A	80-89	4.0
A-	75-79	3.7
B+	70-74	3.3
B	65-69	3.0
B-	60-64	2.7
C+	55-59	2.3
C	50-54	2.0
F1	40-49	1.70
F2	30-39	1.30
F3	0-29	0.00

BACHELOR OF SCIENCES - HUMAN NUTRITION AND DIETETICS

PROGRAMME DESCRIPTION AND REGULATIONS, FMS, UWI, CAVE HILL

PROGRAMME COORDINATOR – MESHELL CARRINGTON

PROGRAMME VISION *- To be at the forefront of the best in class for nutrition and dietetics training by educating the next generation of dynamic, forward-thinking leaders to embrace cutting edge research and collaborative practices to inform their decision making. Paving the way for a healthier Caribbean*

PROGRAMME MISSION *– To train a cadre of nutrition and dietetics professionals who provide safe and ethical care to improve health and wellbeing among the Caribbean region and beyond.*

OVERVIEW

The Bachelor of Science Human Nutrition and Dietetics is designed to facilitate students in the development of the attributes necessary to pursue careers in nutrition and dietetics within the Caribbean region. This programme is intended to train dietitians, who will assess, diagnose, treat and manage diet and nutrition related challenges. Graduates will be taught to effectively apply their knowledge of food, nutrition and dietetics for the benefit of local, regional and international populations.

The programme offers both a didactic and practical component which consist of 32 weeks (1280 hours) and focuses on developing knowledgeable, self-directed, problem solving and collaborative leaders within the field of human nutrition and dietetics. In addition, the programme provides diverse experiential experiences and an applied focus to students.

The programme is structured so that during the first-year students are exposed to introductory courses. In the second and third-years students will build upon the foundation and will be introduced to their professional placements throughout these years. Students will be able to consolidate their knowledge, develop their skills, and master their core competencies through these supervised professional practice experiences which will be completed in the clinical, community and food service settings. In the final Professional Practice rotation students will have the opportunity to complete four (4) weeks (160 hours) in a concentration specific area either in Clinical Nutrition inclusive of Long-Term Care or Community Nutrition. On completion of this training students will be eligible for registration as a Dietitian by the Barbados Paramedical Council or by an equivalent council regionally.

CORE CURRICULUM

The programme core curriculum includes:

- Structure and Function (Cells, Tissues, Organ Systems)
- General and Organic Chemistry for Nutrition
- Social and Cultural Aspects of Food and Health
- Human Development and Behaviour
- Fundamentals of Nutrition, Nutrition Through the Lifecycle, Advanced Nutrition, Nutrition Assessment, Nutrition Counselling and Communication Skills, Nutrition Assessment, Nutrition Education, Community Nutrition, Nutrition for Today
- Medical Nutrition Therapy 1and 2
- Fundamentals of Food Preparation and Food Service Management Systems
- Food Science and Food Product Development
- Food Law and Regulation in the Caribbean OR Functional Food in the Caribbean
- Statistics and Research Methods

COURSE DELIVERY

The programmes will be offered via a blended modality (consist of face to face and online pedagogy - synchronous and asynchronous activity)

Presentation of the core and major courses will be done by a combination of the following:

1. Lectures
2. Laboratory exercises
3. Tutorials
4. Interactive discussions
5. Simulations
6. Research methods
7. Practicums

DURATION OF THE PROGRAMME

Three and a half (3.5) years of full time study and six 6) years of part-time study.

RATE OF PROGRESS

By the end of the 3.5 years, each full-time student is expected to successfully complete 120 credits and the requisite supervised practice experience. Part time students will be permitted up to 6 years to complete 120 credits and the requisite supervised practice experience. Candidates who satisfy these requirements will be eligible for the award of the degree.

Time Limits for completion and enforced withdrawals

A candidate taking examinations in either the core or concentration courses will normally be required to withdraw from the programme, if the candidate is carrying a GPA below 2.0 for two consecutive semesters.

Candidates shall complete the degree (including the foundation courses) in a minimum of seven (7) or a maximum of twelve (12) semesters.

Candidates who do not satisfy the credit requirements for the degree within the maximum time will normally be required to withdraw from the programme. However, if the candidate has exhausted the maximum time limit with a deficit of no more than 6 credits for completion of the degree requirement, the Dean may recommend to Academic Board (after consultation with the Programme Director) an extension of the period of study by one or two semesters.

The pass mark for all courses is 50% and the programme will be delivered under the University's current GPA system implemented August 2014.

Re-admission to the programme after enforced withdrawal

Candidates, who have had to withdraw from the programme due to academic performance, may re-apply for admission after one year of separation.

PROGRAMME(S) OBJECTIVES

The overall objectives of this programme (s) are to produce graduates who:

1. Possess the core integrated knowledge of the nutrition and dietetics, biological, physical, social and behavioural sciences, and food systems management required to practice nutrition and dietetics within diverse populations.
2. Demonstrate the core nutrition and dietetic competencies to practice as an entry level Dietitian/Nutritionist.
3. Perform the role and responsibilities of a registered dietitian as a member of an interdisciplinary team in the healthcare system.
4. Develop an appreciation for effective and efficient utilization and management of available resources to promote nutritional well-being in relation to cultural needs.
5. Maintain high standards of professional values, ethical standards and professional codes of conduct associated with human nutrition and dietetics.
6. Engage in continuous education to incorporate new evidence-based knowledge into practice.
7. Contribute to the health care system through participation in research to inform and enhance practice and, advocate for the inclusion of nutrition as an effective intervention in the prevention and management of disease and the promotion of health.
8. Possess a variety of transferable skills which are expected of all UWI graduates such as problem-solving, use of IT for research, verbal and written communication, and working effectively as part of a team.

PROGRAMME(S) OUTCOMES

On successful completion, the Nutrition and Dietetic graduates will be able to:

1. Explain the fundamental principles, concepts and terminology that underpin human nutrition and dietetics.
2. Describe the relationship between diet, nutrition and disease development, prevention, and management.
3. Apply management principles in the provision of nutrition care and services.
4. Perform nutrition assessment in different settings and recommend appropriate actions.
5. Plan, implement and evaluate nutrition programs with groups, communities or populations to influence behavioural change.

6. Monitor and evaluate parameters directly related to the nutrition diagnosis, goals, and intervention strategies.

7. Collaborate with the multidisciplinary health care team to inform practice.

8. Apply critical thinking, collaborative practice and judgement in all areas of practice including the management of client-centred nutrition care for individuals.

9. Communicate effectively to provide nutrition-related information, advice and professional opinion to individuals, groups and communities.

10. Demonstrate respect for diversity in the administration of nutrition care.

11. Plan and execute research projects integrating knowledge of research principles and methods in regard to nutrition and dietetics practice.

CAREER PATH AND OPTIONS

Overall, graduates with this degree have several career option in healthcare, government, industry and academia. Upon completion of the programme students can work as dietitians/nutritionist in diverse settings including:

- Hospitals and other health care facilities
- Community and public health settings e.g polyclinics, governmental, non-governmental organizations a
- School nutrition and school feeding programs
- Institutional facilities e.g nursing homes, children's homes, day cares centres, correctional facilities
- Health Agencies local, regional or international
- Teaching and Health Promotion
- Corporate wellness programmes
- Insurance companies
- Nutrition communication
- Sports nutrition
- Supermarkets as retail dietitians
- Food and nutrition-related businesses and industries, consumer affairs
- Food Product development.
- Private practice, working under contract with health care or food companies, or in their own business. RDNs may provide services to foodservice or restaurant managers, food vendors and distributors.
- Universities and medical centers, teaching physicians, nurses, dietetics students and others the sophisticated science of foods and nutrition.
- Research areas in food and pharmaceutical companies, universities and hospitals, directing or conducting experiments to answer critical nutrition questions and find alternative foods or nutrition recommendations for the public.

As dietitians advance they careers they can also specialize in a variety of practice areas such as diabetes, paediatrics, neo-natal, critical care and gerontology.

QUALIFICATIONS FOR ADMISSIONS

Admission Requirements

In addition to fulfilling general requirements for admission to the Faculty of Medical Sciences applicants must have the following:

General Matriculation requirements:

Minimum of five (5) CSEC (CXC) subjects (gen. prof. Grades I-III) and/or GCE 'O' Levels (grades A-C) including English Language and Mathematics, Biology and/or Human and Social Biology, Chemistry, and any other appropriate unit.

Specific requirements:

The minimum academic requirements for admission to the Human Nutrition and Dietetics Programme are based on performance in the Caribbean Proficiency Examination (CAPE)/GCE 'A' Level Examinations or their equivalent of which one must be a science subject.

Applicants must have:

- attained their 18th birthday by December 30 of the year of entry.

- achieved passes in two (2) Two-Unit CAPE or 'A' Level subjects including Biology, Chemistry or Physics and any other unit
- equivalent qualifications (as determined from transcript)
- evidence of involvement in co-curricular activities

Applicants Holding Degrees from other Universities

Persons holding degrees from Universities other than the UWI will also be considered provided that:

- The University which granted the degree is recognized by the UWI as competitive.
- A minimum cumulative Grade Point Average of 3.0 or its equivalent has been obtained.

Associate Degrees and Community Colleges

Applicants holding an Associate Degree from an approved community college will be considered provided that a cumulative GPA of 3.5 or greater has been attained.

Equivalent Qualifications

Applications may also be considered from persons holding other qualifications which are deemed by the Faculty to be
equivalent to the categories above as determined from official transcripts.

Mature Students

Mature students (21 years of age and older) with Associate degrees, diplomas and certification in a health-related discipline inclusive of the GCE O'Level/CXC/CSEC requirements stated and the relevant work experience will be considered.

Please note that entry into the Human Nutrition and Dietetic Undergraduate Degree Programme is highly competitive and being qualified is not a guarantee of acceptance.

Non-academic/Co-curricular criteria

- All applicants are required to submit certified evidence of their involvement in co-curricular activities in support of their application (see guidelines for submission in application package)
- Recent and/or sustained involvement of the applicant in such activities will be considered in assessing the suitability of applicants for a career in Human Nutrition and Dietetics.

In addition to the co-curricular form, applicants to this Faculty must submit a short (300 word or less) autobiographic sketch outlining the reasons for their career choice.

Programme Courses

Level I

Semester 1

HESC1000 Structure & Function 1 - Cells & Tissues
HNDT1000 Introduction to the Profession of Nutrition and Dietetics Professional Practice
HNDT1001 General Chemistry for Nutrition
HESC1010 Fundamentals of Nutrition
FOUN1006 Exposition for Academic Purposes

Semester 2

HESC1000 Structure & Function 1 - Cells & Tissues
HNDT1002 Social and Cultural Aspects of Food and Health
HNDT1003 Organic Chemistry for Nutrition
HNDT1004 Fundamentals of Food Preparation and Food Safety
EDSC1200 Introduction to Health Education Pedagogy

Level II

Semester 1

HESC2000 Structure & Function 2 - Organ Systems
HESC3007 Nutrition Throughout the Life Cycle
HESC2002 Human Development & Behaviour
HNDT2001 Introduction to Food Science
FOUN1101 Caribbean Civilization

Semester 2

HESC2000 Structure & Function 2 - Organ Systems
HNDT2009Advanced Nutrition
ECON1005 Introduction to Statistics
HNDT2002 Nutrition Assessment
HNDT2003 Food Service Management Systems

Summer Semester

HNDT2004 Professional Practice in Dietetics 1

Electives

HNDT2005 Functional Foods in the Caribbean **OR**
HNDT2006 Food Law and Regulation in the Caribbean

Level III

Semester 1

HNDT3001 Medical Nutrition Therapy 1
HNDT3002 Nutrition Counselling and Communication Skills
HESC2004 Nutrition for Today
MDSC3200 Understanding Research
MKTG2001 Introduction to Marketing

Semester 2

HNDT3003 Medical Nutrition Therapy 2
HNDT3006 Food Product Development
HESC3001 Nutrition Education
HNDT3005 Community Nutrition
FOUN1301 Law, Governance, Economy and Society

Summer Semester

HNDT3004 Professional Practice in Dietetics 2
HNDT3010 Research Project in Human Nutrition and Dietetics

Level IV

HNDT4004 Professional Practice in Dietetics 3
HNDT4005 Professional Practice in Dietetics 4

COURSE DESCRIPTIONS

LEVEL 1

COURSE CODE: HESC1000
TITLE: Structure and Function 1 (Cells & Tissues)
CREDITS: 6
SCHEDULE: YEAR 1, Semesters 1 & 2

This course introduces students to a variety of biological concepts and the basic principles of Biochemistry, Genetics, Microbiology, Molecular Biology and Cell Biology in living organisms. Content areas that will be studied include water and acid/base chemistry; DNA replication and assortment; microbial diversity; molecular techniques and tissues. Students will explore the basis of connective tissue disorders and neurological diseases and will use microscopic/histology details to form the foundation or pathological findings of the tissues and to confirm diagnosis. The course will also help in the development of various methods for rehabilitation in cases of neurological and muscular disorders.

COURSE CODE: HNDT1000
TITLE: Introduction to the Profession of Nutrition and Dietetics
CREDITS: 3
SCHEDULE: YEAR 1, Semester 1

This course seeks to expose dietetic students to the various professions within the field of nutrition and dietetics and enlighten them about the significant roles dietetics professionals play in various environments and settings. In addition, this course seeks to introduce students to the dietetics' professional scope of practice and code of ethics. Through personal reflection, and guidance students will be allowed to chart their individual dietetic career path. Health Care Systems and medical terminology will also be explored. Students will complete twelve (12) volunteer hours in a nutrition related area as part of the course requirement.

COURSE CODE: HNDT1001
TITLE: General Chemistry for Nutrition
CREDITS: 3
SCHEDULE: YEAR 1, Semester 1

General Chemistry for Nutrition is a year 1 course appropriate for students studying in nutrition and dietetics. Topics such as the scientific method, elements, compounds, mixtures and their relation to the human body, chemical properties related to food, heat conduction and convection, radiation, and induction in the preparation of a variety of food products and the dietary aspects of transition metals will be included. The chemistry of water, a core component of the human body and a powerful solvent, will also be discussed. The course will be assessed using labs, quizzes, and examinations.

COURSE CODE: HESC1010
TITLE: Fundamentals of Nutrition
CREDITS: 3
SCHEDULE: YEAR 1, Semester 1

This introductory course is designed to provide students with an understanding of the basic principles of human nutrition. Essential nutrients, their properties, function, requirements, interrelatedness and metabolism will be presented via face-to-face and online modalities. Energy balance will also be included. The role of nutrition in the prevention and management of specific diseases (obesity and diabetes) will be explored.

COURSE CODE: HNDT1002
TITLE: Social and Cultural Aspects of Food and Health
CREDITS: 3
SCHEDULE: YEAR 1, Semester 2

This course examines the many components that shape individual food preferences and food choices. The impact that factors such as culture, religion, celebration, location, and finances have on food consumption patterns worldwide will be discussed. Essential to this course, is an emphasis on understanding and accepting a range of cultural and social influences that compels personal food behaviours.

COURSE CODE: HNDT1003
TITLE: Organic Chemistry for Nutrition
CREDITS: 3
SCHEDULE: YEAR 1, Semester 2
**Prerequisite: HNDT1001 General Chemistry for Nutrition*

This course introduces students to the basic principles of organic chemistry and its applications in nutrition and dietetics. Topics covered include the structural and stereoisomerism as it relates to natural products, chemistry of food additives and polymers for food application. Oxidation and reduction activity and their relationship to antioxidants will be explored. This course will be assessed using labs, quizzes, and a final examination.

COURSE CODE: HNDT1004
TITLE: Fundamentals of Food Preparation and Food Safety
CREDITS: 3
SCHEDULE: YEAR 1, Semester 2

This course serves dual roles of equal importance in food preparation and food safety. Firstly, it is intended to demonstrate and illustrate the chemical and physical components of various food items. The impact of food processing, varying ingredients, and storage on the quality and nutritional retention of food will be examined. Students will have the opportunity to prepare and evaluate a category of food items (e.g. breads, cakes, meats, fruits and vegetables) using a variety of chemical, instrumental and sensory analysis techniques. The focal point is on applied food development for nutrition and dietetic students. Secondly, this course will provide an early introduction to Food Safety by exploring basic food safety techniques to prevent food borne illness in the food service setting. The Hazard Analysis Critical Control Point (HACCP) which sets a high standard for food safety at all points of the food chain will be described.

LEVEL II
COURSE CODE: HESC2000
TITLE: Structure and Function 2 (Organ Systems)
CREDITS: 6
SCHEDULE: YEAR 2, Semesters 1 & 2
**Prerequisite: HESC1000 - Structure and Function 1 (Cells & Tissues)*

This course offers a basic examination of the functions of the major organs and organ systems of the human body. Students will explore how the different systems of the body are involved in performing specific tasks and how their functions are integrated. The unique role of each organ and organ system in maintaining health will be examined, and the set-point around which the physiological variables are maintained emphasized. The importance of different physiological feedback systems in maintaining human body function at rest and under various forms of stress will be discussed. Content areas of study include homeostasis and body composition; the cardiovascular system; the nervous system; endocrine and reproductive physiology; and excretion.

COURSE CODE: HESC2002
TITLE: Human Development and Behaviour
CREDITS: 3
SCHEDULE: YEAR 2, Semester 1

This technology enhanced course presents the fundamentals of human development across the life span. It familiarizes students with the principal mechanisms of behavioural development from embryology through ageing and death. Students will examine the physiological and psychological dynamics that shape human behaviour through independent study, and while working in groups. Content areas that will be addressed include basic embryology; developmental theories; the lifecycle approach to health issues; health for an ageing population; personality theories; applied cognitive psychology; and psychophysiology.

COURSE CODE: HNDT2001
TITLE: Introduction to Food Science
CREDITS: 3
SCHEDULE: YEAR 2, Semester 1

This course examines the nature of foods through the various disciplines including engineering, biological, and physical sciences. Causes of deterioration, principles underlying food processing, and the improvement of foods for the consuming public are analysed. Current ethical ecological issues/controversies will also be studied with the intent of helping students become more astute at identifying facts and discussing

concerns related to the global sustainability of food technology and food supply.

COURSE CODE: HESC3007
TITLE: Nutrition throughout the Lifecycle
CREDITS: 3
SCHEDULE: YEAR 2, Semester 1
**Prerequisite: HESC1010 - Fundamentals of Nutrition*

This course is designed to enable the understanding of nutritional needs throughout various stages of the lifecycle. Students will examine nutrition during preconception, pregnancy, lactation, infancy, childhood, adolescents, adulthood and aging. Additionally, challenges that are unique to different populations will be explored. Food security and at-risk populations will be addressed and the concept of community nutrition within the context of the Caribbean will be evaluated. The twelve determinants of health will be integrated. The course will be delivered using both face-to-face and online modalities and students will engage in independent study and group work to achieve the learning outcomes.

COURSE CODE: HNDT2002
TITLE: Nutrition Assessment
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2
**Prerequisite: HESC1010 - Fundamentals of Human Nutrition*
HESC 3007 Nutrition Throughout the Life cycle

This course is rooted in the Nutrition Care Process (NCP) and concentrates on the components of nutrition assessment. Dietary assessment techniques inclusive of 24-hour recall, dietary records, food frequency questionnaires and diet history are examined. Other techniques to evaluate the nutritional status of individuals are examined including clinical assessment, anthropometric and body composition assessment, biochemical assessment, and physical assessment. Students will be exposed to practical, hands-on sessions for such topics.

COURSE CODE: HNDT2003
TITLE: Food Service Management Systems
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2
**Prerequisite: HNDT1004 Fundamentals of Food Preparation and Food Safety*

The principles of food preparation and food safety are applied to quantity food production and food service systems in both the commercial and non-commercial food service environment. This course seeks to educate students on how to perform quantity food production accurately and efficiently in the food service settings. Emphasis is given on the utilization of specialized quantity food preparation equipment, menu planning and procurement. Major topics such as culinary math will be included.

COURSE CODE: HNDT20099
TITLE: Advanced Nutrition
CREDITS: 3
SCHEDULE: YEAR 2, Semester 2
**Prerequisite: HESC1010 - Fundamentals of Nutrition*

This course examines how both macronutrients and selected micronutrients are metabolized in the framework of human development with an emphasis of disease prevention. The functional and regulatory roles will be emphasized. Students will work individually and in groups to investigate: the contribution of antioxidants to health and wellbeing; basic concepts in biochemistry and nutrition; and energy systems and physical activity. The metabolism of amino acids, lipids and alcohol will also be examined.

COURSE CODE: HNDT2004
TITLE: Professional Practice in Dietetics 1
CREDITS: 6
SCHEDULE: YEAR 2, Summer
**Prerequisite: HNDT2003 Food Service Management Systems*

This course provides the opportunity for students to thoroughly examine and understand the operations of a food service organization. Students will develop quality assurance projects that will be useful to the organization and analyse customer service in the specific food service establishment. The platform will be afforded for nutrition and dietetic students to formally obtained their ServSafe food safety certification while utilizing the knowledge gained through the theoretical aspect of the ServSafe course in a real-world food service setting. At the conclusion of the practicum the student will be expected to present a reflection of lessons learnt and recommend opportunities for improvement.

COURSE CODE: HNDT2005
TITLE: Functional Foods in the Caribbean
CREDITS: 3
SCHEDULE: YEAR 2, Summer
**Prerequisite: HNDT1002 Social and Cultural Aspects of Food and Health*

Functional foods or "medicinal" foods are any fresh or processed food claimed to have a health-promoting and/or disease-preventing property beyond basic nutrition. The scope for functional foods inclusion in Caribbean diets is vast and can range from whole, fortified, enriched, or enhanced foods. Functional foods including bioactive compounds, phytochemical and polyphenols will be discussed. This course will integrate nutritional science, food science, regulation and safety, and nutrient metabolism to understand and explain functional foods and, nutraceuticals.

COURSE CODE: HNDT2006
TITLE: Food Law and Regulation in the Caribbean
CREDITS: 3
SCHEDULE: YEAR 2, Summer
**Prerequisite: HNDT1002 Social and Cultural Aspects of Food and Health*

This course focuses on the laws, regulations and policies that govern the production/importation of safe food in the Caribbean. Topics in relation to the regulation of food labels and claims, food safety frameworks, specialized food, dietary supplements, nutraceuticals, and functional foods as well as Genetically Modified Organisms (GMOs) and the regulatory agencies which play a role in the inspection of facilities and documents to ensure reinforcements of the laws will be studied.

LEVEL III

COURSE CODE: HESC2004
TITLE: Nutrition for Today
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1
Prerequisite: HESC1010 - Fundamentals of Nutrition

This course will expose students to nutrition from a practical perspective. Topical issues and concerns which affect today's nutrition and consequently health will be discussed. Through face-to-face and online modalities, participants will be provided with tools and skills to manage their own nutritional wellbeing. Cultural aspects of food, designing a healthy diet as well as the contribution of physical activity to health and wellness will be explored. Consumer concerns about foods will also be addressed.

COURSE CODE: MDSC3200
TITLE: Understanding Research
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1

This course is designed to facilitate the acquisition of knowledge and skills to analyze a research paper and to gain basic skills to conduct a scientific research. The course introduces a range of qualitative and quantitative research methods and the techniques involved in analyzing both qualitative and quantitative data, as well as considering ethical issues relating to research. It includes an introduction to basic epidemiology, the use and interpretation of biostatistics and an exploration of the tools used in carrying out health-related research. Students will use theoretical underpinnings to determine how research findings are useful in their understanding of clinical and public health work, and applications to health policies. Student will also be made aware of the ethical principles of research, ethical challenges and approval processes.

COURSE CODE: HNDT3001
TITLE: Medical Nutrition Therapy 1
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1
**Prerequisites:*
HESC2000 Structure and Function 2- Organ Systems
HESC3004 Advanced Nutrition
HNDT2002 Nutrition Assessment

Medical Nutrition Therapy I (MNT) illustrates how diet and nutrition provide the therapeutic framework and evidence-based practice to specific pathophysiological conditions. This course will introduce and apply the Nutrition Care Process Model which includes nutrition assessment, nutrition diagnosis, nutrition intervention, and nutrition monitoring and evaluation to the treatment and management of chronic and other diseases including overweight and obesity, cardiovascular disease, endocrine disease, and cancer. This course integrates knowledge and skills from nutrition, biochemistry, physiology, and the behavioural sciences.

COURSE CODE: HNDT3002
TITLE: Nutrition Counselling and Communication Skills
CREDITS: 3
SCHEDULE: YEAR 3, Semester 1
**Prerequisite: HNDT2002 – Nutrition Assessment*

This course will develop students' understanding of the various methods used in communication and counselling within the field of nutrition and dietetics. Current nutrition communication and counselling theories and techniques including motivational interviewing, person centred counselling and behaviour change strategies, in addition to development of age-appropriate communication modalities will be explored in this course. Students will have the opportunity to apply their counselling and communication skills through hands on practice, stimulation exercises and case studies.

COURSE CODE: HNDT3003
TITLE: Medical Nutrition Therapy 2
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2
**Prerequisite: HNDT3001 Medical Nutrition Therapy 1*

Medical Nutrition Therapy II is part two of Medical Nutrition Therapy courses and serves as the culminating class in the clinical nutrition area in the BSc Human Nutrition and Dietetics programme. It addresses gastrointestinal, pulmonary, renal, and neurological diseases in addition to transplantation and critical illness and metabolic stress. Students will have the opportunity to practice nutrition management during nutrition support (enteral and parenteral

nutrition). They will continue to apply the nutrition care process model and integrate concepts from nutrition, biochemistry, physiology, and the behavioural sciences.

COURSE CODE: HNDT3006
TITLE: Food Product Development
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2
**Prerequisites:*
HNDT2001 Introduction to Food Science
MKTG2001 Introduction to Marketing

This course provides a unique opportunity for students to develop a food product using specifications which promote good health. Industrial concepts and technology as they apply to food product development and formulation will be examined. This course includes concepts such as principles of new product development, ingredient replacements, and product improvements. Development of a marketing plan, Hazard Analysis Critical Control Point (HACCP) plan, prototype, package, and product cost analysis will be applied to new product development.

COURSE CODE: HESC3001
TITLE: Nutrition Education
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2
**Prerequisites:*
HESC1010 - Fundamentals of Nutrition
HESC2004 - Nutrition for Today
HESC3007 - Nutrition throughout the Life-Cycle

This technology enhanced course presents the fundamentals of nutrition education from a theoretical and practical perspective. Participants will be exposed to nutrition program planning and evaluation strategies with application to select groups. Communications strategies in both written and oral form will be employed to plan appropriate nutrition messages. Areas of study include nutrition education; behavioural change; national nutrition agenda; and nutrition counselling.

COURSE CODE: HNDT3005
TITLE: Community Nutrition
CREDITS: 3
SCHEDULE: YEAR 3, Semester 2
**Prerequisite: HESC3007 – Nutrition Throughout the Life Cycle*

Community Nutrition is a third-year course offered in the nutrition and dietetics program and is designed to equip students with the knowledge and skills to develop community interventions. It covers concepts such as community needs assessment, developing nutrition intervention strategies and evaluating program implementation and effectiveness. Students will have the opportunity to participate in service learning through placement at selected sites. The course will be assessed using quizzes, course engagement activities and community nutrition intervention activities.

COURSE CODE: HNDT3004
TITLE: Professional Practice in Dietetics 2
CREDITS: 6
SCHEDULE: YEAR 3, Summer
**Prerequisite: HNDT3005 Community Nutrition*

This course will offer nutrition and dietetic students a practical learning opportunity in a specific community nutrition setting and allow for the integration of concepts including nutrition assessment, counselling, and education, in addition to program planning, presentation, management and evaluation. Students will thoroughly examine a community nutrition organization and develop population targeted projects/interventions that will be useful to the organization's clientele. At the conclusion of the practicum, they will be expected to present a reflection of lessons learnt and recommend opportunities for improvement.

COURSE CODE: HNDT3010
TITLE: Research Project in Human Nutrition and Dietetics
CREDITS: 3
SCHEDULE: YEAR 3, Summer
**Prerequisites:*
ECON 1005 Introduction to Statistics
MDSC3200 Understanding Research

This course is created to provide students with the opportunity to conduct and implement a research project in the field of food, nutrition, or dietetics under supervision using the scientific research methods. Students will investigate the topic proposed in the *Understanding Research* course, analyse and present an evaluation of the research project, prepare a final report on the work performed and defend its application.

LEVEL IV

COURSE CODE: HNDT4004
TITLE: Professional Practice in Dietetics 3
CREDITS: 3
SCHEDULE: YEAR 4
**Prerequisites:*
HESC 3007 Nutrition Throughout the Life Cycle
HNDT2002 Nutrition Assessment

This course provides the nutrition and dietetic student with an experiential learning opportunity in introductory clinical nutrition. The practical use of

nutrition screening followed by the application of the nutrition care process (NCP) for normal nutrition and nutrition throughout the lifecycle are incorporated. Students will become familiar with medical notes/charts, different therapeutic diets, and common drug nutrient interactions at the various clinical sites. At the conclusion of the praticum the student will be expected to present a reflection of lessons learnt and recommend opportunities for improvement.

COURSE CODE: HNDT4005
TITLE: Professional Practice in Dietetics 4
CREDITS: 9
SCHEDULE: YEAR 4
**Prerequisites:*
HNDT 3001 Medical Nutrition Therapy 1
HNDT3003 Medical Nutrition Therapy 2

This course provides the nutrition and dietetic student with an advance professional practice experience in clinical nutrition. Students will apply the tenets of the nutrition care process to provide medical nutrition therapy (MNT) in acute and complex disease states to various populations. Students will also be able to practice the varied functions of the Clinical Dietitian. Prior to the conclusion of this practicum students will be expected to provide two (2) weeks of staff relief.

GRADING SCHEME

Letter Grade	Numeric Score	GPA
A+	90-100	4.3
A	80-89	4.0
A-	75-79	3.7
B+	70-74	3.3
B	65-69	3.0
B-	60-64	2.7
C+	55-59	2.3
C	50-54	2.0
F1	40-49	1.70
F2	30-39	1.30
F3	0-29	0.00

BACHELOR OF SCIENCE IN PRECLINICAL SCIENCES

PROGRAMME DESCRIPTION AND REGULATIONS, FMS, UWI, CAVE HILL

PROGRAMME COORDINATOR – DR. IBRAHIM SULAIMAN

OVERVIEW

The programme comprises courses offered in the Faculties of Science and Technology and Medical Sciences. Students will be required to complete twenty-eight (28) courses (126 credits): Three (3) foundation courses inclusive of one (1) of two (2) BSc Health Sciences courses in the programme; eight (8) courses from Preliminary level courses in the Faculty of Science and Technology; and sixteen (16) courses taken from current Level 1-3 courses in the MBBS programme. The six-credit course HESC1005 – Health Care System will serve as a third foundation course. Students will also be required to take FOUN1006 – Exposition for Academic Purposes, and FOUN1101 – Caribbean Civilization OR FOUN1301 – Law, Governance, Economy and Society, to satisfy the University's foundation course requirement.

The courses are delivered by lectures, conferences, seminars, tutorials, self-study, use of learning aids (including information technology), practicals and demonstrations including clinical bedside teaching. Outlines of these are provided in the course handbooks.

The candidate's progress in each course is assessed on the basis of his or her performance in a combination of in-course assignments and projects, and written, practical, clinical and oral examinations, as outlined in the course handbooks.

The curriculum of the Bachelor of Science in Preclinical Sciences programme incorporates courses from the Faculties of Science and Technology during Year 1, followed by courses from the Faculty of Medical Sciences in Years 2 and 3. In Year 1, students will establish a solid footing in essential scientific disciplines such as mathematics, physics, chemistry, and biology. In Year 2 and 3, the focus will shift towards building a strong foundation in the basic medical sciences that are directly relevant to medicine. This phase of the programme will equip students with the essential knowledge and skills they need before transitioning to the clinical phase of the MB ChB Programme.

PROGRAMME GOALS

The programme has been developed to provide learning opportunities that enable students to acquire fundamental knowledge, develop basic skills and appreciate principles relevant to health care in the context of the community.

More specifically the programme is designed to:

- Prepare students for evidence-based medical practice in the changing health care environment of the 21st Century
- Enable students to understand the development of man and man's relationship to society and the environment
- Develop fundamental knowledge of molecular and cellular biology, genetics and human nutrition
- Facilitate the acquisition of a thorough and integrated knowledge of the structure and functioning of the human body in health and disease
- Promote personal development and the skills required to obtain information from and communicate effectively with patients and colleagues
- Develop knowledge that helps to bridge the gaps between clinical care, health care diversity and critical inquiry
- Foster a compassionate, analytical and ethical approach in the delivery of health care to the community.

PROGRAMME OUTCOMES

On successful completion of this programme, students should be able to:

- Attain the preclinical sciences' competencies required for clinical training in the medical (MB ChB) programme at the University of Ghana.
- Apply knowledge of basic biomedical sciences to clinical analysis and problem solving.
- Obtain a complete medical history, including issues related to age, gender and socio-economic status of the patients.
- Perform a physical examination appropriate for each major organ system.
- Recognize common life threatening emergencies and identify appropriate primary interventions.
- Identify appropriate investigations based on the patient's condition and interpret the results for common diseases and conditions.

- Perform and/or observe commonly used/basic medical diagnostic and therapeutic procedures
- Demonstrate knowledge of important, pharmacological and non-pharmacological therapies available for prevention and treatment of common diseases.
- Evaluate current research and principles of evidence-based medicine in the care of patients and populations.
- Demonstrate a commitment to high professional and ethical standards.
- Demonstrate a commitment to independent, lifelong learning and on-going professional development for the acquisition of new knowledge and skills.
- Identify contemporary issues and practices related to economics and management of health care services affecting population health.
- Recognise the various National Health Programmes, and the ways in which they are being implemented.
- Demonstrate an ethos of service to better meet the health needs of the population they serve.

ENTRY REQUIREMENTS

Age Requirements

Applicants must be at least 18 years old on December 30 of the year of entry to the programme.

Admissions

a. Applicants must submit their applications to the Campus registrar, The University of the West Indies, Cave Hill Campus by the end of the second week of January of each year. For procedures concerning applications and for further information candidates should write to the Assistant Registrar, Admissions.

b. Applicants for admission to this programme must satisfy both the general matriculation requirements of the University and the specific requirements of the Faculty of Medical Sciences for entry to the BSc - Preclinical Sciences programme.

Admissions Criteria for the BSc - Preclinical Sciences Programme

The following admissions criteria is for the BSc - Preclinical Sciences programme. Note that the criteria is equivalent to the criteria in West Africa for admission to the medical programme (MB ChB) at the University of Ghana. The WASSCE criteria along with the alternate criteria below satisfy the entry requirements for the BSc - Preclinical Sciences programme and the articulation agreement between The University of the West Indies, Cave Hill and the University of Ghana.

1. West African Senior School Certificate Examination (WASSCE)
Passes in three (3) core and three elective subjects inclusive of:
- Core Mathematics
- English
- Chemistry
- Physics
- Biology

2. GCE O' and A' Level or CXC CSEC and CAPE equivalents
Passes in a minimum of five (5) CXC CSEC subjects of general proficiency (Grades I-III) or GCE O' Level (Grades A-C) inclusive of:
- Chemistry
- Physics
- Biology
- Mathematics
- English Language

Passes in four subjects at A' Level or four two-units of the CAPE equivalents in:
- Chemistry
- Physics
- Biology
- Mathematics

3. International Baccalaureate (IB) Programme
Students must have passes in IB subjects equivalent to the entry criteria established for GCE A 'Level/CAPE subjects.

Note that 5% (or less) of students who are admitted to the medical programme at the University of Ghana satisfy the requirements with GCE A' levels. The BSc – Preclinical Sciences' entry requirements with GCE A' Level subjects exceed the entry criteria marginally at the University of Ghana.

NON–ACADEMIC CONSIDERATIONS

All applicants are required to submit a short 250-300-word autobiographical summary outlining the reasons for their career choice. An applicant's chances of entry will be enhanced by documented and certified involvement in extracurricular activities in the years prior to his/her application.

Candidates must also produce evidence of their involvement in relevant extra-curricular/co-curricular activities, socially-oriented projects and voluntary community service in the year prior to their application. In addition to academic ability, the faculty is seeking rounded individuals with a range of abilities and interests. Such must be readily definable and subject to

proof. They include, but are not limited to, leadership qualities, social awareness and excellence in sport, language or the arts.

All applicants are required to submit original documents with certified evidence of their abilities or involvement in such activities in support of their applications.

Documents must be signed and stamped by an appropriate person (school official, employer, supervisor, etc.) and, to be considered, must state both the duration of involvement in the activity and the level of involvement or achievement attained.

Any information in such submissions, if found to be falsified, will result in withdrawal of the offer of entry and may constitute grounds for dismissal.

In general, sustained involvement in one or two activities over time is favoured over recent activity in many areas.

Fitness to Practise
Becoming a doctor means more than acquiring knowledge and skills. Medical students cannot complete the undergraduate curriculum without coming into close and sometimes intimate contact with members of the public who may be vulnerable or distressed. It is essential that you do nothing to diminish the trust which sick people and their relatives place in you. The award of a medical degree entitles you to be provisionally registered and to practise under supervision as a doctor. The award of a medical degree by the University thus confirms that you are fit to practise to the high standards laid down by the profession.

Universities have a duty to ensure that no member of the public is harmed as a consequence of participating in the training of their medical students and that your conduct as a medical student maintains the high standards of honesty and behaviour that the public has a right to expect from the medical profession.

PROGRAMME STRUCTURE

Foundation courses (12 credits)

1. FOUN1006 Exposition for Academic Purposes (3 credits)
2. HESC1005 Health Care System (6 credits)
3. FOUN1101 Caribbean Civilization (3 credits) OR FOUN1301 Law, Governance, Economy and Society (3 credits)

Year 1 (48 credits)

1. BIOL0051 Biology I (6 Credits)
2. BIOL0052 Biology II (6 Credits)
3. CHEM0615 Prelim Chemistry I (6 Credits)
4. CHEM0625 Prelim Chemistry II (6 Credits)
5. MATH0100 Pre Calculus (6 Credits)
6. MATH0110 Calculus and Analytical Geometry (6 Credits)
7. PHYS0070 Preliminary Physics I (6 Credits)
8. PHYS0071 Preliminary Physics II (6 Credits)

Year 2 (33 Credits)

1. MDSC1000 Fundamentals of Disease and Treatment (6 Credits)
2. MDSC1103 Introduction to General Embryology and Histology (3 Credits)
3. MDSC1105 The Locomotor System (3 Credits)
4. MDSC1201 Cell Biology (3 Credits)
5. MDSC1202 Introduction to Medical Practice (Unit 1) (3 Credits)
6. MDSC1104 Introduction to Molecular Medicine (3 Credits)
7. MDSC3105 The Urinary System (3 Credits)
8. MDSC1205 The Respiratory System (3 Credits)
9. MDSC1206 Neuroscience 1: The Peripheral Nervous System (3 Credits)
10. MDSC3101 Clinical Haematology (3 Credits)

Year 3 (33 credits)

1. MDSC2103-The Cardiovascular System (6 Credits)
2. MDSC2104 Digestive System (6 Credits)
3. MDSC2201 The Endocrine System and the Skin (3 Credits)
4. HESC2003 Health Science Research (3 Credits)
5. MDSC2202 Introduction to Medical Practice (Unit 2) (3 Credits)
6. MDSC2203 Neuroscience II: The Central Nervous System (6 Credits)
7. MDSC2205 The Reproductive System (6 Credits)

Total Credits: 126

COURSE DESCRIPTIONS

Foundation Courses
Students will be required to take foundation courses to satisfy the University's foundation course requirement. The Medical Faculty recommends that students aim to complete these course within the first two years of the curriculum and we have made provisions for them in the timetables during the first three semesters. Because it is a University regulation that these courses are completed satisfactorily before a University degree can be awarded.

COURSE CODE: HESC1005
TITLE: Health Care Systems
CREDITS: 6
SCHEDULE: Semester 1 & 2

This course provides students with a fundamental understanding of how local and regional health care systems function while stimulating critical thinking about practical and policy implications. There will also be a focus on understanding the connections between various physical, social and biological factors and health outcomes. Practical examples, applications, issues and exercises requiring critical thinking and effective written presentations will be emphasized by the use of case studies in workshop sessions. Small group self-study sessions are also designed within the course to encourage independent learning among students.

COURSE CODE: FOUN1001
TITLE: EXPOSITION FOR ACADEMIC PURPOSES
CREDITS: 3
SCHEDULE: Semester 1 & 2
This course is designed to: Equip students with the study and research skills they will need in order to get the maximum benefit from all their course at the University; Familiarize them with the linguistic situation in the Caribbean and break down certain misconceptions they usually have about it; Introduce students to the rhetorical modes of discourse; Develop skill in critical thinking and reading.

COURSE CODE: FOUN1101
TITLE: CARIBBEAN CIVILIZATION
CREDITS: 3
SCHEDULE: Semester 1 & 2, Summer Semester
This course is designed to develop an awareness of the main process of cultural development in Caribbean societies, highlighting the factors, the problematics and the creative output that have fed the emergence of Caribbean identities; to develop a perception of the Caribbean as wider than island nations or linguistic blocs, to stimulate students' interest in, and commitment to Caribbean civilization and to further their self-determination.

COURSE CODE: FOUN1301
TITLE: LAW, GOVERNANCE, ECONOMY AND SOCIETY
CREDITS: 3
SCHEDULE: Semester 1 & 2, Summer Semester
This is a multi-disciplinary course of the Faculty of Social Sciences which is designed mainly for non-Social Sciences students. The course will introduce students to some of the major institutions in Caribbean society. It will expose them to both historical and contemporary aspects of Caribbean society, including Caribbean legal, political and economic systems. In addition, Caribbean culture and Caribbean social problems are discussed.

YEAR 1

BIOL0051 - BIOLOGY I (6 Credits)
Pre-requisite: None
Syllabus: Cellular Biology: The historical development of Cell Theory. Prokaryotic and Eukaryotic cells. The Endosymbiotic Theory. Cellular structures and their functions. The cell membrane (The Fluid Mosaic Model). Cellular Transport. Microscopy. Biochemistry: The biochemistry and importance of water. Carbohydrates, proteins and lipids: Their structure and biological importance. Enzymes (structure and function). Nucleic Acids. Genetics: The history of Genetics. Modes of inheritance. The nature of the genetic material. Mutation. Nuclear division (mitosis and meiosis). Molecular Biology: DNA replication, transcription and translation. Reproductive Biology: Bacterial reproduction. Viral replication. Fungal reproduction. Human male and female reproductive systems. Reproduction in angiosperms

Teaching: Three lectures, one tutorial and three hours of practicals per week.

Method of Examination:
Theory: Final Examination (3 hours) 60%
Theory: In-course assessments 20%
Practical: Exercises and reports 20%

BIOL0052 - BIOLOGY II (6 Credits)
Pre-requisite: None
Syllabus: Bioenergetics: The acquisition of energy. The role of adenosine triphosphate (ATP) in the cell. How ATP is generated. Autotrophic nutrition (Photosynthesis). Heterotrophic nutrition. Cellular respiration. Biosystems Maintenance: The Human Digestive system - The structure and function of the human digestive system. The organs of the digestive system and their role. The types of digestion. The function of enzymes during digestion. The digestion, absorption and assimilation of carbohydrates. Proteins. Lipids The Human Excretory system - Excretory organs and excretory products in the human body. The macro- and microstructure of the kidney. The formation of urine. The counter-current multiplier of the kidney nephron. Osmoregulation in the kidney. Respiratory systems - The importance of respiratory surfaces in organisms. Common features of respiratory surfaces. Respiratory system in man. Respiratory surface in plants. Transport systems - Importance of transport systems in multicellular organisms. Structure and function of the transport system in humans. The cardiac cycle. The transport of oxygen and carbon dioxide in the blood. The Bohr shift. The role of white blood cells in conferring immunity. Structure and function of the transport tissue in plants. Structure and Movement -

Comparison of endo-, exo- and hydrostatic skeletons. The endoskeleton in humans and its functions - The major bones of the human body. The structure of bone. The different types of joints. How movement is accomplished across joints. How muscle action brings about movement. Muscle contraction as explained using the sliding filament theory. Nervous and Hormonal Coordination - The importance of coordinated responses in organisms. The structure of nervous tissue. The organization of the nervous system. The reflex arc. The structure and regions of the brain. Generation and conduction of nervous impulses. The role of endocrine glands and hormones in the human body. Comparison of nervous and hormonal coordination. Ecology and Evolution: Energy transfer in the ecosystem. Biogeochemical cycles. The effect of biotic and abiotic factors on population distribution. Population dynamics (Demographics). How diversity arises. The importance of biodiversity in the ecosystem. Human impact on the environment.

Teaching: Three lectures, one tutorial and three hours of practicals per week.

Method of Examination:
Theory: Final Examination (3 hours) 60%
Theory: In-course assessments 20%
Practical: Exercises and reports 20%

CHEM0615 - PRELIM CHEMISTRY I (6 Credits)
Pre-requisite: None
Restriction: Not to be taken if student has passed CHEM0615 – Preliminary Chemistry I, CHEM0355 – Preliminary Chemistry A or CAPE Chemistry Unit 1.
Syllabus: This course familiarizes students with the fundamental concepts of chemistry such as the mole concept, chemical equations, atomic structure, periodicity and interactions between molecules. It introduces them to the basic concepts of physical chemistry such as gases, thermochemistry, equilibria, kinetic and electrochemistry. A course of about 26 lectures, associated tutorials and a maximum of 39 hours of laboratory work on Inorganic and Physical Chemistry. Atomic Theory. Forces of Attraction. Periodicity. Mole Concept. Kinetic Theory. Energetics. Equilibrium. Rates of Reaction. Electrochemistry.

Teaching: Two lectures, one tutorial and three hours of practical work per week.

Method of Examination:
Theory: Final Examination (3 hours) 60%
Theory: In-course Test(s)/Assignment(s) 20%
Laboratory Exercises 20%

CHEM0625 - PRELIM CHEMISTRY II (6 Credits)
Pre-requisite: None
Restriction: Not to be taken if student has passed CHEM0625 – Preliminary Chemistry II, CHEM0125 – Preliminary Chemistry B or CAPE Chemistry Unit 2.
Syllabus: A course of about 26 lectures, associated tutorials and a maximum of 39 hours of laboratory work on Organic Chemistry and Analytical Chemistry. This course introduces students to the basic concepts of organic and analytical chemistry as well as familiarizes students with the basic industrial and environmental applications of chemistry. It stands as an alternative to CAPE Chemistry Unit 2 and will be delivered in a face-to-face modality. Structure, formulae and nomenclature of organic compounds. Introduction to reaction mechanisms. Functional groups and their reactions. Analytical techniques and associated calculations. Petroleum industry. Haber & Contact processes. Aluminium industry. Preparation of chlorine. Environmental impact of selected industries and pollutants. Green Chemistry and waste reduction.

Teaching: Two lectures, one tutorial and three hours of practical work per week.

Method of Examination:
Theory: Final Examination (3 hours) 60%
Theory: In-course Test(s)/Assignment(s) 20%
Laboratory Exercises 20%

MATH0100 - PRE CALCULUS (6 Credits)
Pre-requisites: Caribbean Secondary Education Certificate (CSEC) General Proficiency course in Mathematic, AND / OR the CSEC General Proficiency course in Additional Mathematics, OR EQUIVALENT.
Syllabus: Propositions, logical connectives, truth tables and logical equivalence, Properties of binary operations, inequalities, methods of proof and remainder theorem, Exponential and logarithmic functions, indices, laws of logarithms and inverse functions, Domain, range, injective, surjective, equations and inequalities involving simple rational functions and modulus function, Trigonometric functions, identities and equations, Equations of tangents and normal to circles, points of intersection of two curves, parametric representation and Cartesian equation of a curve, Three dimensional representation of vectors, addition and scalar product of vectors, position and unit vectors, length and direction of vector, vector equations of lines and planes, Concept of limits, limit theorems, continuity and intermediate value theorem, Derivative as limit, gradient, rates of change, differentiation from first principles, product and quotient rules, second derivatives and curve sketching, Linearity law of integration, indefinite and definite integrals, application of integration, methods of integration and solutions of simple first order differential equations by integration. Propositions, logical connectives, truth tables and logical equivalence, Properties of binary operations, inequalities, methods of proof and remainder theorem, Exponential and logarithmic

functions, indices, laws of logarithms and inverse functions, Domain, range, injective, surjective, equations and inequalities involving simple rational functions and modulus function, Trigonometric functions, identities and equations, Equations of tangents and normal to circles, points of intersection of two curves, parametric representation and Cartesian equation of a curve, Three dimensional representation of vectors, addition and scalar product of vectors, position and unit vectors, length and direction of vector ,vector equations of lines and planes, Concept of limits, limit theorems, continuity and intermediate value theorem, Derivative as limit, gradient, rates of change, differentiation from first principles, product and quotient rules, second derivatives and curve sketching, Linearity law of integration, indefinite and definite integrals, application of integration, methods of integration and solutions of simple first order differential equations by integration.

Teaching: Five (5) lectures and one (1) tutorial per week.

Method of Examination:
Final Theory Examination (3 hours) 50%
In-course Tests/Assignments 50%

In order to pass this course, Students MUST PASS BOTH the course work component and final examination.

MATH0110 - CALCULUS AND ANALYTICAL GEOMETRY (6 Credits)

Pre-requisites: Caribbean Secondary Education Certificate (CSEC) General Proficiency course in Mathematic, and / or the CSEC General Proficiency course in Additional Mathematics, or EQUIVALENT.

Syllabus: Express complex numbers in the form a + bi, where a and b are real numbers, Add, subtract, multiply and divide complex numbers, Interpret modulus and argument of a complex number in Argand diagram, Find the derivative of e^f(x) and ln f(x), where f(x) is a differentiable function of x, Find first and second derivatives of combinations of polynomials, trigonometric, exponential and logarithmic functions, Apply the chain rule to obtain gradients and equations of tangents and normal to curves given in parametric form, Use the concept of implicit differentiation, Integrate an improper rational function, exponential function and logarithmic function, Find integrals of the form ∫(f^' (x))/f(x) and use substitutions to integrate functions (the substitutions will be given in non-trivial cases), Derive and use reduction formulae to obtain integrals which may involve integration by parts, Define the concept of a sequence as a function from the positive integers to the real numbers, Describe the behaviour of convergent and divergent sequences by simple examples, Define a series as the sum of n terms of a sequence, Define the mth partial sum as the sum of first m terms of the sequence. Use the Maclaurin and Taylor theorem for the expansion of series, Expand (a+b)^n, for nεQ in terms of Pascal Numbers (▒(n@r)), Use linear interpolation to find an approximation for a root in a stated interval, Use the Newton-Raphson method to approximate roots, Find the number of ways of combining and permuting different objects, Define and calculate the probability of an event occurring by using simple laws, Invert a non-singular matrix of order n for n = 2, 3, Reduce a system of linear equations to echelon form, Determine whether a system of linear equations is consistent or inconsistent, Solve a differential equations of the form, dy/dx+ky=f(x), where k is a constant or function of x and f is a function Solve second order ordinary differential equations with constant coefficients and given boundary conditions.

Teaching: Five (5) lectures and one (1) tutorial per week.

Method of Examination:
Final Theory Examination (3 hours) 50%
In-class Tests/Assignments 50%

In order to pass this course, Students MUST PASS BOTH the course work component and final examination.

PHYS0070 - PRELIMINARY PHYSICS I (6 CREDITS)

Pre-requisite: None

Syllabus: SI units, dimensional analysis, vectors, equilibrium, Newton's laws of motion, linear motion, displacement, average and instantaneous velocity and acceleration, constant acceleration, free fall, relative velocity, motion in a plane, projectile motion, circular motion, centripetal force, applications of Newton's second law, gravitation, mass and weight, satellite motion, friction, work and kinetic energy, gravitational and elastic potential energy, dissipative and conservative forces, power, moments and torque, equilibrium problems, stress, strain, elastic moduli, Hooke's law, simple harmonic motion, mass-spring system, simple pendulum. Temperature, thermometers, scales, thermal expansion, heat capacity, phase changes, conduction, convection, radiation, Stefan-Boltzmann law, ideal gas, equation of state, phase diagrams, triple and critical points, vapor pressure, effect of dissolved substances on freezing and boiling point, first law of thermodynamics, work and heat, adiabatic, isochoric, isothermal and isobaric processes, internal energy, molecular theory of motion, kinetic theory of ideal gas. Mathematical representation of traveling waves, standing waves, behavior of waves at boundaries, interference, sound waves, beats, intensity, decibels, the ear and hearing, quality and pitch, Doppler effect, ultrasonics and applications. Pressure in a fluid, pressure gauges, Archimedes' principle, surface tension, contact angle and capillaries, Bernoulli's equation, viscosity, Stokes' law, Reynold's number.

Teaching: Three (3) lectures, one tutorial per week and 52 hours of practical work.

Method of Examination:
Final Theory Examination (3 hours) 60%
In-course Tests/Assignments 20%
Practical Reports 20%

PHYS0071 - PRELIMINARY PHYSICS II (6 CREDITS)
Pre-requisite: None
Syllabus: Electric charge, Coulomb's law, insulators and conductors, electric field, lines of force, electric potential, potential differences, electron volt, capacitance, series and parallel combination, energy stored in a capacitor, dielectrics, current, resistivity, resistance, electromotive force, work and power, resistors in series and parallel, Kirchoff's laws, Wheatstone bridge and potentiometer. Magnetic fields and field lines, magnetic flux, motion of a charged particle in a magnetic field, Thomson's measurement of charge to mass ratio for the electron (e/m), isotopes and spectrography, force on a current-carrying wires, induced emf, Faraday's law, Lenz's law, eddy currents, speed of light. Waves and rays, refraction and reflection from plane and spherical surfaces, refraction at plane and spherical surfaces, focal point and length, thin lenses, converging and diverging lenses, lens maker equation, aberrations, the eye, defects of vision, magnifier, camera, projector, compound microscope, telescope. Atomic nucleus, radiation from nuclear decay, isotopes and isobars, binding energy and stability, alpha, beta and gamma rays, decay law, decay constant, half-life, activity, radioactive shielding.

Teaching: Three (3) lectures, one tutorial per week and 52 hours of practical work.

Method of Examination:
Final Theory Examination (3 hours) 60%
In-course Tests/Assignments 20%
Practical Reports 20%

YEAR 2

COURSE CODE: MDSC1000
TITLE: Fundamentals of Disease and Treatment
CREDITS: 6
SCHEDULE: Semester 1 & 2
The aim of this course is to provide a background for the better understanding of the system-based courses that follow it. The multidisciplinary approach used and much of the content is basic to an understanding of disease states and how drugs work and it serves as an important introduction to the integrated approach used in the delivery of the other courses. The content provides a foundation for understanding important basic disease processes such as infection, inflammation, genetic disorders, tumour pathology and disorders of growth and assists students to appreciate how these affect the different organ systems when these are taught later in the programme. It also introduces the chemical structures and families of drugs commonly used in the treatment of patients and how these work to modulate disease processes.

COURSE CODE: MDSC1103
TITLE: Introduction to General Embryology and Histology
CREDITS: 3
SCHEDULE: Semester 1
The primary aim of this course is to provide students with an understanding of the processes by which a single fertilized ovum develops into specialized tissues and organs to eventually form a complex multicellular organism. It covers the development and differentiation of cells, tissues and organs and provides a general view of human development and the structure of tissues and provides a basis for understanding the relationships and positions of normal adult structures. It serves as the framework for understanding the more detailed development, structure and functioning of body systems and the abnormalities which result from disorders of development.

COURSE CODE: MDSC1105
TITLE: The Locomotor System
CREDITS: 3
SCHEDULE: Semester 1
The aim of this course is to provide the student with a thorough knowledge base of the functional anatomy of the upper and lower limbs and of the spinal column as these relate to each other in health and disease. As the first in a series of systems - based courses it provides a comprehensive and integrated approach to learning the structure and function of the human body and introduces the anatomical terminology required to describe relationships of structure. Through the use of illustrative cases and relevant pathophysiology, it also helps students to appreciate the features, diagnosis and management of the common clinical conditions that affect muscles, bones and joints.

COURSE CODE: MDSC1201
TITLE: Cell Biology
CREDITS: 3
SCHEDULE: Semester 1
Cell Biology (MDSC1201) covers the following objectives: 1) The structure and function of biological molecules; 2) The biochemical pathways of intermediary metabolism; 3) The functional significance of biochemical processes and their regulation in normal and aberrant states. The course is organized into 5 units:
Unit 1: Introduction to biological molecules

This unit covers the structures and cellular roles of amino acids and proteins, enzyme structure and catalysis, enzyme kinetics and bioenergetics.
Unit 2: Structure and function of carbohydrates
The major metabolic pathways of carbohydrate, intermediary metabolism including inborn errors, vitamin deficiencies and their effects on carbohydrate structure and function.
Unit 3: Structure and function of lipids
Lipid classes structure, biosynthesis and degradation, and clinically relevant correlations.
Unit 4: Structure and function of proteins
The metabolism of essential and non-essential amino acids, the urea cycle, heme metabolism, and other specialized products derived from amino acids. Emphasis is given to inborn errors of amino acid metabolism.
Unit 5: Integration of metabolism
This unit focuses on the fast/feed cycle, hormonal regulation of metabolism and the associated organ specific metabolic changes.

COURSE CODE: MDSC1202
TITLE: Introduction to Medical Practice I
CREDITS: 3
SCHEDULE: Semesters 1 and 2
This is the first unit of a multi-faceted introductory course which spans the first two years of the programme and is designed to provide students with the foundation skills necessary for their later clinical and hospital-based clerkships. Unit 1 aims to inculcate at an early stage the attitudes and behaviours appropriate to the practice of medicine. It emphasizes personal & professional development, an important theme running through the curriculum and encompasses communication skills, professional conduct, including deportment, patient confidentiality and includes a parallel course in basic pre-hospital management of common medical emergencies.

COURSE CODE: MDSC1104
TITLE: Introduction to Molecular Medicine
CREDITS: 3
SCHEDULE: Semester 2
The aim of this course is to introduce students to the principles of Molecular Biology and to show how they may be used to understand and treat human disease. It builds on the fundamentals of the structure and functions of nucleic acids and proteins and serves as an important foundation for understanding advances in genetics and developments in modern medical research. It covers medical aspects of genetics including population genetics. Molecular techniques used in diagnosis and treatment are presented and ethical implications surrounding the application of molecular biology to medicine are discussed.

COURSE CODE: MDSC3105
TITLE: The Urinary System
CREDITS: 3
SCHEDULE: Semester 2

The Urinary System course offers a fundamental presentation of the various components of the urinary system – kidney, ureter, urinary bladder and other associated structures. The course describes the development, anatomical characteristics – both at the macro and micro level, functions, structure-function relationship, functioning of the system under abnormal conditions, invasion of the system by pathogenic organisms, and principles of treatment by using drugs and preventive measures. This course also describes interrelationship of the urinary system with other systems of the body, its role in the maintenance of homeostasis, various feedback mechanisms by which kidneys keep the physiological variables within normal limits.

COURSE CODE: MDSC1205
TITLE: The Respiratory System
CREDITS: 3
SCHEDULE: Semester 2
The main aim of this system-based course is to provide students with an understanding of the normal anatomy and physiology of the respiratory system and how it is affected by common disease conditions.This course addresses the normal and the abnormal structure and function of the human respiratory system, the mechanics of breathing and factors influencing breathing. Gaseous exchange in the lungs in health a disease is covered as well as important drugs used in the treatment of common respiratory illnesses. Aspects of the investigation and care of patients with respiratory disease are introduced to reinforce basic knowledge of the normal state and to highlight the importance of this knowledge to medical practice.

COURSE CODE: MDSC1206
TITLE: Neuroscience 1: The Peripheral Nervous System
CREDITS: 3
SCHEUDLE: Semester 2
The main aim of this course is to explain the role of the peripheral nervous system in controlling visceral and skeletal muscle functions and how it can be modulated for therapeutic benefits to the patient. Neuroscience is concerned with the study of the human nervous system which consists of two major divisions, the central nervous system (CNS) and the peripheral nervous system (PNS).In this course, the anatomical organization, functions and regulatory mechanisms of the peripheral nervous system are presented. The content provides the foundation for understanding the neural regulation of the functions of peripheral organs, glands and tissues that are dealt with in later courses.

COURSE CODE: MDSC3101
TITLE: Clinical Haematology
CREDITS: 3
SCHEDULE: Summer Semester
This course builds on the Fundamentals Course in Year 1 and reviews the normal structure and function of the haematological and lymphoreticular systems including the spleen, thymus and lymph nodes. Important disorders of the blood and lymphoreticular system are introduced along with methods of diagnosis and the principles of management. The causes and classification of common or important inflammatory and neoplastic conditions are highlighted and made relevant by means of illustrative cases.

YEAR 3

COURSE CODE MDSC 2103
TITLE: The Cardiovascular System
CREDITS: 6
SCHEDULE: Semester 1
The aim of this course is to provide an overview of the normal and abnormal structure and function of the cardiovascular system. It covers the essential core of information that students are required to know about the cardiovascular system in order to begin their hospital based clinical training. The course is integrated, so that whilst the teaching of Anatomy, Physiology, Pharmacology, Pathology and Microbiology of the cardiovascular system is emphasized, there is also exposure to introductory clinical knowledge which permits an appreciation of the clinical relevance of the disciplines mentioned.

COURSE CODE: MDSC2104
TITLE: The Digestive System
CREDITS: 6
SCHEDULE: Semester 1
This course aims to provide students with a fundamental understanding of the gastrointestinal tract and its importance in the processes of digestion, absorption and excretion as well as the role it plays in homeostasis. It covers the gross anatomy, embryology, histology and functional aspects of the gastrointestinal tract and its accessory organs including morphological concepts related to the processes of mastication, deglutition, motility and secretions, digestion, absorption and defaecation. It provides students with an appreciation of the important pathophysiology of the digestive system and highlights the basic scientific knowledge behind the principles governing the management of common disorders.

COURSE CODE: MDSC2105
TITLE: Health and the Environment
CREDITS: 3
SCHEDULE: Semester 2
Building on the material introduced in the Year 1 Health Care Concepts Course concerning wellness and disease prevention, this course aims to provide students with an overview of the interrelationship between man and his environment, and of the environment as a major determinant of health. It introduces students to disaster management in the Caribbean, including both natural and technological disasters. Emphasis is placed on credible disasters, the role of the physician in the overall management of disasters generally and specifically in the hospital setting. In addition, a spectrum of important viral, bacterial and parasitic infections is included with emphasis on sources, routes of transmission, prevention and control.

COURSE CODE: MDSC2201
TITLE: The Endocrine System & Skin
CREDITS: 3
SCHEDULE: Semester 1
In both development and delivery, this course utilizes a multidisciplinary approach to the teaching of applied anatomy and physiology of the endocrine system and the skin. By combining clinical and pathological aspects, it provides relevance and a critical link between under-standing the basic medical sciences in the normal state and applying this knowledge to diseases that affect patients. The chemical structure, synthesis, mechanisms of action, and functions of hormones are illustrated along with the various regulatory mechanisms that affect their production. In addition, the content includes the structure and function of the skin and the medically important conditions affecting it.

COURSE CODE: HESC2003
TITLE: Health Science Research
CREDITS: 3
SCHEDULE: Semester 2
This course introduces students to research methodology in health sciences. It will include specific instruction and practical learning experiences covering the literature review, study design and processes for summarising data. Students will also be exposed to techniques for health data acquisition and management. The resulting knowledge and skills that they will acquire will enable them to make evidence-based decisions about healthcare policy and practice. Topics that will be addressed in the course are: principles of epidemiology; statistics for the health sciences; interpretation of the literature; planning a research project; and funding for research. Practical examples, applications, issues and exercises requiring critical thinking and effective written presentations will be emphasized.

COURSE CODE: MDSC2202
TITLE: Introduction to Medical Practice II
CREDITS: 3
SCHEDULE: Semester 2
The main aim of this course is to prepare students for the junior clerkships in Year 3 by training them in the art and practice of clinical history-taking, writing case histories and carrying out a simple physical examination. During a four-week, full-time block, students receive a series of lectures/demonstrations. Where performance, attendance and/or participation is considered unsatisfactory or unsafe, students may be required to attend remedial sessions before being permitted to commence the junior clerkships in year 3.

COURSE CODE: MDSC2203
TITLE: Neuroscience II: The Central Nervous System
CREDITS: 6
SCHEDULE: Semester 2
The aim of this course is to equip students with comprehensive knowledge about the normal structure and functioning of the central nervous system and the important pathological conditions that affect it. It takes an in-depth look at the structure and function of the central nervous system (the brain and spinal cord), and introduces students to important diseases affecting the central nervous system, the methods used in investigating patients, and the treatment modalities employed, including pharmacotherapy. Additionally, it covers important drugs acting on the central nervous system, the investigations used to aid clinical diagnosis and outlines the principles behind medical and surgical treatments of central nervous system disorders.

COURSE CODE: 2205
TITLE: The Reproductive System
CREDITS: 6
SCHEDULE: Semester 2
This course aims to provide students with sufficient knowledge of the macroscopic and microscopic structure of the human reproductive system to enable them to understand both normal reproductive function and the effects of common clinical abnormalities on these systems. It employs an integrated approach and provides a basis for students' understanding of the relevant anatomy of reproductive systems and how these function in health and disease. By inclusion of relevant pathophysiology and case-based problems, it provides a foundation for appreciation of the features, diagnosis and management of common clinical conditions and prevention.

BSc Preclinical Sciences Programme Structure

Courses	Semester 1	Semester 2	Summer Semester
Foundation courses (12 credits)			
FOUN1006 Exposition for Academic Purposes (3 credits)	✓	✓	
HESC1005 Health Care System (6 credits)	✓	✓	
FOUN1101 Caribbean Civilization (3 credits) **OR** FOUN1301 Law, Governance, Economy and Society (3 credits)	✓	✓	✓
Year 1 (48 credits)			
BIOL0051 Biology I (6 credits)	✓		
BIOL0052 Biology II (6 credits)		✓	
CHEM0615 Prelim Chemistry I (6 credits)	✓		
CHEM0625 Prelim Chemistry II (6 credits)		✓	
MATH0100 Pre-Calculus (6 credits)	✓		
MATH0110 Calculus and Analytical Geometry (6 credits)		✓	
PHYS0070 Preliminary Physics I (6 credits)	✓		
PHYS0071 Preliminary Physics II (6 credits)		✓	
Year 2 (33 Credits)			
MDSC1000 Fundamentals of Disease and Treatment (6 Credits)	✓	✓	
MDSC1103 Introduction to General Embryology and Histology (3 Credits)	✓		
MDSC1105 The Locomotor System (3 Credits)	✓		
MDSC1201 Cell Biology (3 Credits)	✓		
MDSC1202 Introduction to Medical Practice (Unit 1) (3 Credits)	✓	✓	
MDSC1104 Introduction to Molecular Medicine (3 Credits)		✓	
MDSC3105 The Urinary System (3 Credits)	✓		
MDSC1205 The Respiratory System (3 Credits)		✓	
MDSC1206 Neuroscience 1: The Peripheral Nervous System (3 Credits)		✓	
MDSC3101 Clinical Haematology (3 Credits)			✓
Year 3 (33 credits)			
MDSC2103-The Cardiovascular System (6 Credits)	✓		
MDSC2104 Digestive System (6 Credits)	✓		
MDSC2201 The Endocrine System and the Skin (3 Credits)	✓		
HESC2003 Health Science Research (3 Credits)		✓	
MDSC2202 Introduction to Medical Practice (Unit 2) (3 Credits)		✓	
MDSC2203 Neuroscience II: The Central Nervous System (6 Credits)		✓	
MDSC2205 The Reproductive System (6 Credits)		✓	
Total Credits: 126			

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