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Director - School of Veterinary Medicine

Dr. Winthrop Harewood (Acting)

Deputy Dean - Basic Health Sciences

Dr. Trevor Alleyne

Deputy Dean - Clinical Medicine

Dr. Zulaika Ali

Deputy Dean - Distance Education & Outreach

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Administrative Assistant - Examinations

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Administrative Assistant - School of Dentistry

Ms. Evelyn Ferreira

Administrative Assistant - School of Veterinary Medicine

Mrs. Ann Seepersad

Heads of Schools/Departments

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Department of Pre-clinical Sciences

Professor Amanda McRae

Department of Para-clinical Sciences

Dr Michele Monteil

SCHOOL OF DENTISTRY

Department of Dental Sciences

Dr. P R Murti (Acting)

SCHOOL OF VETERINARY MEDICINE

Department of Clinical Veterinary Sciences

Dr. Winthrop Harewood (Acting)

SCHOOL OF MEDICINE

Department of Clinical Medical Sciences

Dr. Surujpal Teelucksingh

Department of Clinical Surgical Sciences

Professor Samuel S. Ramsewak

PHARMACY PROGRAMME

Programme Head

Dr. Gopalkrishna Pillai

Academic Diary

SEMESTER 1

Registration Begins	August 16, 2004
Semester Begins	August 29, 2004
Examinations	December 6 to 22, 2004
Ends	December 22, 2004

SEMESTER 2

Begins	January 16, 2005
Mid-semester Break	March 27 to April 2, 2005
Classes resume	April 4, 2005
Examinations	Nov 9 - Nov 26, 2004 Phase II DDS [Repeat] Nov 8 - Dec 3, 2004 Phase II MB BS [Repeat] Mar 11 - Apr 1, 2005 Phase IC May 9 - May 28, 2005 Phase IA and Phase IB May 9 - June 9, 2005 Phase II MB BS May 2 - May 20, 2005 Dentistry May 5 - May 20, 2005 Veterinary Medicine May 12- May 23, 2005 Pharmacy Aug 1- Aug 5, 2005 Veterinary Medicine Repeat Aug 19, 2005 Dentistry Repeat Aug 19, 2005 Pharmacy Repeat Aug 15- Sep 1, 2005 Phase IC Repeat Aug 19 - Sept 1, 2005 Phase 1A, Phase 1B Repeat
Semester Ends	May 12, 2005 (Campus) June 10, 2005 (Faculty of Medical Sciences)

1. MISSION STATEMENT OF THE FACULTY OF MEDICAL SCIENCES

To recruit and train students as health care professionals in Medicine as well as in Dentistry, Veterinary Sciences, and fields allied to health; to meet the needs of and improve the health care delivery system for the people they serve, by striving for professional excellence throughout their career in this constantly changing world.

To contribute to the social, economic, and cultural development of the Caribbean by maintaining a Centre of Excellence, inculcating in graduates an attitude of excellence in service and research.

2. FACULTY OF MEDICAL SCIENCES

Background

The University of the West Indies (UWI) was founded in 1948 at Mona, Jamaica as a College of the University of London. In that year, thirty-three students from nine countries of the British West Indies were admitted to the founding Faculty of Medicine. The University Hospital was completed in 1953 when the first graduates obtained their MB BS degree, having had their clinical training at the Kingston Public Hospital. In 1961, The University of the West Indies became an independent entity and at about that time it established two other campuses, first in Trinidad at St. Augustine and later in Barbados at Cave Hill. The University then served 15 different territories, most of which were still colonies of Great Britain.

As a result of a feasibility study on expansion and/or duplication of the Faculty of Medicine, the University accepted the need for expansion and in 1979 the Government of Trinidad & Tobago agreed to fund the establishment of the school and hospital at Mount Hope. A purpose-built facility to accommodate Medical, Dental, Veterinary, Pharmacy and Advanced Nursing Education was built on the Mount Hope site where a Women's Hospital was already located and which was in use for that segment of the training of students in Trinidad. This complex subsequently called the Eric Williams Medical Sciences Complex is managed by the Government of Trinidad & Tobago and since 1989 accommodates the teaching facilities of the Faculty of Medical Sciences at St. Augustine for Medical, Dental, Veterinary and Pharmacy students.

3. FACULTY REGULATIONS

Admissions

GENERAL INFORMATION

1. Candidates must submit their applications to the Campus Registrar, The University of the West Indies, St. Augustine, normally before January 31 of each year. For procedures concerning applications and further information, candidates should write to the Campus Registrar.
2. Candidates who wish to begin the degree courses must fulfil the general University requirements concerning matriculation and the specific requirements of the Faculty as set out in paragraph 3 below.
3. All applicants are admitted under the condition that applications for transfer are rarely approved as targets for numbers of graduating future professionals have already been pre-set, and that the minimum number of points required must be comparable with the relevant standard set by the entering class of the year of applicant's entry into the desired programme. (E.g., a Pharmacy student entering with 12 points in 2003, will be considered for transfer to MB BS in 2004 in competition with the minimum score of MB BS entrants in 2003 (probably 14-15 points))

Note on Abbreviations:

1. *GCE Advanced Level* and *Caribbean Advanced Proficiency Examination [CAPE]* are both hereinafter referred to as **A-levels/CAPE**
2. *GCE Ordinary Level* and *the Caribbean Examinations Council's Caribbean Secondary Education Certificate Examination at the General Proficiency Level (CSEC)* both hereinafter referred to as **O-levels/CSEC**

Section A – Requirements

Applicants are categorised into the following groups:

APPLICANT CATEGORY 1

Qualified Applicants - those who meet the University's matriculation requirements

Most of these include persons with the following qualifications:

- A-levels/CAPE
- Pure Science degrees
- Both A-levels/CAPE and a Pure Science degree
- At least one year of a three year degree programme

APPLICANT CATEGORY 2

Unqualified applicants

- Applicants expecting to be qualified (awaiting results)
- Special consideration applicants
- Applicants who do not meet the minimum requirements. These are informed by letter immediately of non-acceptance, and the reason for non-acceptance

NOTE: Category 2 applicants who have not been rejected are considered on a space available basis, preference having been given to Category 1 applicants.

APPLICANT CATEGORY 3

Unqualified foreign national applicants entering the Pre-Health Professions Programme

- This programme is designed to prepare applicants, who are currently unable to meet the requirements for matriculation, with the necessary knowledge, skills, and attitudes for the degree programmes at the Faculty of Medical Sciences (FMS), UWI
- 32 spaces are to be allocated to foreigners; by exception, 8 spaces are allocated to persons nominated and paid for by the Tobago House of Assembly
- It is a 36-credit programme, consisting of five courses delivered in modules – Mathematics, Physics, Chemistry, Biology and English.
- Applicants achieving satisfactory results in all subjects will be deemed to have achieved matriculation status and will be re-presented to the Entrance Committee to be considered for entry into one of the regular degree programmes

REQUIREMENTS FOR ADMISSION

- Applicant Categories 1 & 2

Dentistry DDS

Veterinary Medicine DVM

Medicine MB BS

According to Faculty Regulations, the minimum specific requirements for admission to the Faculty are the candidate's performance and attainment at GCE A-level in the following schemes:

Scheme A

Chemistry, Biology/Zoology and Physics
A pass at O-levels/CSEC Mathematics

Scheme B

Chemistry, Biology/Zoology and Mathematics
A pass at O-levels/CSEC Physics is required

Scheme C

Chemistry, Physics and Mathematics
A pass at O-levels/CSEC Biology is required

NOTES:

- A pass in any other subject at A-level may be substituted for Mathematics or Physics in any of the above schemes, providing that the subject substituted has been passed at O-levels/CSEC.
- MB BS and DDS - A triple major Associate Degree from Barbados Community College with a GPA greater than 3.5 is considered acceptable for entry into the programme
- DVM - A triple major Associate Degree from Barbados Community College with a GPA greater than 3.0; or, the Jamaica College of Agriculture, Science and Education (CASE) Associate Degree in Natural Sciences with a GPA of 2.5 or greater is considered acceptable for entry into the programme
- Applicants for all programmes must submit an autobiographical statement. This should include an outline of reasons for their career choice, limited to two hundred words.

Pharmacy BSc

Scheme A, Scheme B or Scheme C

as in MB BS and DDS above

Scheme D

Chemistry and ONE other from Biology, Zoology, Physics or Mathematics
A pass at O-levels/CSEC Mathematics AND Physics is required.

- Candidates admitted under Scheme D are not permitted transfer to other programmes in the Faculty.
- Passes in the above subjects taken in preliminary and/or introductory examinations in the Faculty of Natural Sciences, UWI, or equivalent examination(s) in institutions recognised by the UWI, are acceptable.

- Relevant Associate Degrees from Barbados Community College with a GPA greater than 3.0 is considered acceptable for entry into the B Sc Pharmacy programme
- Applicants for all programmes must submit an autobiographical statement. This should include an outline of reasons for their career choice, limited to two hundred words.
- Pharmacy students applying from within Trinidad & Tobago must complete a prescribed form in duplicate to register their interest in pursuing a career in Pharmacy with the local Pharmacy Board/Council. One copy of this form must accompany their application to the Campus Registrar. The Pharmacy Board/Council will forward the other copy directly to the University. Students from other territories may need to consult with their Pharmacy Boards or Councils to ascertain whether they need to follow any existing regulations.

- Applicant Category 3

The Pre-Health Professions Programme will last for three semesters beginning in August 2003. The courses will be completed at the end of the 'summer' session of nine weeks in July. Successful students can therefore matriculate with the year 1 professional degree students in September 2004.

The minimum specific requirements for admission to the Programme are:

1. Candidates should have a high school (Grade 12 matriculation) with a minimum grade point average (GPA) of 3.0 in:
 - Chemistry
 - Physics
 - Mathematics
 - Biology
 - English
2. Alternatively, candidates should have 5 O-level/CSEC passes with grades A, B, and C in the same subjects or European equivalents.
3. Consideration will be given to students transferring from other fields to the health professions.

Section B – Selection Requirements

B. 1 Methodology for scoring the categories of qualified applicants

Applicants with A-levels/CAPE

The assessment chart (Table I below) is used to give applicants a score based on their A-level grades, in the combination of subjects described above.

Applicants with a Pure Science degree

Applicants must have done at least two semesters of courses in a combination of the subjects identified above. The two highest grades in each subject area are then used to give the applicant a score. This is done by matching the grades in the graduate column of assessment chart (Table I below) then finding the appropriate score in the Score column.

Applicants with A-levels/CAPE and a Pure Science degree

The same procedure is followed for the A-levels/CAPE and degree using the assessment chart. The better score for the subject area is used to accumulate a score.

Applicants who have completed at least one year of a degree programme

Applicants must have completed at least two semesters of courses in a combination of the subjects identified above. The two highest semester grades in each subject area are then used to give the applicant a score. This is done by using the key to properly categorise the students, then matching the grades in the appropriate column of the assessment chart (Table I below) and applying a score.

TABLE I - Score of assessment of subjects

A-level	FSA Prelim (N1)	N2, N3, N4	Graduate	SCORE
A	A+ A	A+ A	A+ A	5
B	A-	A- B+	A- B+	4
C	B+ B	B B-	B B-	3
D	B-	C+ C	C+ C	2
E	C+ C C-	C- D	C- D	1

Key

Prelim Course - One-year programme in the sciences run by the School of Continuing Studies on behalf of the Faculty of Science & Agriculture, previously known as N1

N2 - Year 1 University Course

N3 - Year 2 University Course

N4 - Year 3 University Course

Graduate - Applicant has a first degree

3. Registration

3.1 Registration for courses takes place during the first week of each academic year. Late registration may be permitted in accordance with the University's general regulations.

3.2

4. Courses of Study

(MB BS; DDS; DVM, BSc Pharmacy Degrees)

4.1 The course for the MB BS degree lasts not less than ten (10) semesters plus a Clinical Internship of eighteen (18) months and consists of:

- a. *Phase I - Six (6) semesters (sharing common courses where applicable with Dentistry, Veterinary Medicine and Pharmacy for not less than two (2) semesters).*
- b. *Phase II - Four and a half (4 1/2) semesters*

4.2 The course for the DDS degree lasts not less than ten (10) semesters plus twelve (12) months of General Dental Practice and consists of:

- a. *Phase I - Four semesters (sharing common courses where applicable with Medicine and Veterinary Medicine for not less than three (3) semesters)*
- b. *Phase II - Six (6) semesters*

4.3 The course for the DVM Degree lasts not less than ten (10) semesters plus sixteen (16) weeks of compulsory field experience of which not less than ten (10) weeks should be of a clinical nature after Phase I and between the third and fourth (4th) years, and consists of: -

- a. *Phase I - Four (4) semesters (sharing common courses where applicable with Medicine, Dentistry and Pharmacy for not less than two (2) semesters).*
- b. *Phase II - Four (4) semesters*
Phase III - Two (2) semesters

4.3.1 The Programme for the BSc Pharmacy Degree lasts not less than four (4) years and consists of the following components:

- (a) Foundation Courses
- (b) An Integrated Programme of Basic Medical Sciences
- (c) Communication Skills
- (d) Social Sciences
- (e) Pharmaceutical Sciences
- (f) Pharmacy Studies
- (g) Pharmacy Practice including Outreach and Clinical Clerkship Programmes

5. Exemptions

5.1 A student who has completed a course and passed an examination from this or other recognised University in a course equivalent to the part or the whole of a course in the MB BS, DDS, DVM, BSc Pharmacy degree courses may apply through the Head of Department for exemption. The Head of Department shall examine the syllabus, nature and duration of, and the student's grading in the examination in that course, the time, which has elapsed since it had been completed, and in particular whether such course is equivalent in whole or in part to that offered in The University of the West Indies. The Head of Department through the Dean shall make one of the following recommendations to the Faculty Board indicating the reasons for such recommendation:

- a. that the student be exempted from both the course and the examination

- b. that the student be exempted from a part or the whole of the course, but be required to take a part of or the full examination
 - c. that the application be rejected
- 5.2 Exemptions shall not be granted automatically to students who have been asked to withdraw from and/or have been re-admitted to the Faculty.

6. **Debarments, Repeats, Withdrawals**

- 6.1 Where there is dissatisfaction with the work of a student, the Head of a Department/School may report the matter to the Dean and the Faculty Board which may recommend to the Academic Board (St. Augustine) that the student be debarred from the examination and either repeat the course or be required to withdraw from the Faculty of Medical Sciences.
- 6.2 Students required to withdraw from the University for failing to complete the degree programme within the stipulated time or for poor performance as provided for in the Faculty Regulations, may be re-admitted to the Faculty **after at least one year** has elapsed since their withdrawal.

7. **Phase I Programme**

- 7.1 In all Schools except the Pharmacy Programme, courses will be presented by the use of a problem-based method, emphasising student-centred learning.
- 7.2 Medical and dental students will follow a Skills training programme which will focus on interviewing and basic clinical examination techniques, as well as a variety of motoric skills. Medical and Dental students will be required to pass an OSCE (Objective Structured Clinical Examination) (MD280) prior to proceeding to Phase II of the curriculum. **Dental students are NOT exempt from this examination. Veterinary students will participate in a Veterinary Oriented Clinical Skills Programme.**
- 7.3 During the first semester of Phase I, the following courses will be offered on a systemic basis in Problem Based Learning (PBL) courses as Environment and Health (MD10A); Basic Para-clinical Sciences (MD10B).

For Pharmacy students, these courses are components of PM104. During the second semester Digestion & Metabolism (MD11A); Cardiovascular & Renal (MD11B) will be taught. **For Pharmacy students these courses are components of PM104.** During the second semester of Phase I, Veterinary students will take the courses VM11A and VM11B, which will run concurrently with MD11A and MD11B. The following disciplines will be covered during the courses: Anatomy, Biochemistry, Physiology, Pharmacology, Pathology, Microbiology, Public/Community Health, Behavioural Sciences and Sociology of Health.

7.4 **In subsequent semesters in Phase I:**

7.4.1 **During Year 2 Semester 1**, students in the School of Medicine will continue to follow courses in Respiration (MD20A) and Neurosciences & Behaviour (MD20B). During Year 2 Semester 2, students will follow courses in Endocrine & Reproduction (MD21A) and Muscles, Bones and Joints (MD21B). Students will follow courses in Pathology/Microbiology, Pharmacology, and Community Health (MD310), which extend over Semester 1 and part of Semester 2 of Year 3.

7.4.2 During Year 2 Semester 1, students in the School of Dentistry will take the following courses in Respiration (MD20A); Neurosciences & Behaviour (MD20B) in addition to Skills training (MD280) and part of Oral Biology [DD101]. A special programme of units in Basic Dental Sciences will take place on Year 2, Semester 2. Included are the units of: Regional Anatomy of the Head and Neck (DD100) and Oral Biology (DD101), which includes Dental Anatomy, Oral Histology and Embryology, Oral Physiology and Oral Biochemistry. A laboratory-based unit of instruction in Operative Dental Techniques I (DD103), and Dental Materials Science (DD102), also occurs at this time.

7.4.3 During Year 2, students in the School of Veterinary Medicine will follow courses in Animal Production (VM110); Veterinary Anatomy (VM101); Physiology/Biochemistry (VM120); General Microbiology (VM170). Pharmacology/Therapeutics (VM150); General Pathology (VM160); Protozoology and Entomology (VM180).

- 7.4.4 During Year 2 Semester 1 & 2, students in the Pharmacy Programme will follow courses in Respiration (MD20A), Neurosciences & Behaviour (MD20B), Endocrine & Reproduction (MD21A) and Muscles, Bones & Joints (MD21B). **These courses are components of PM204. Pharmacy students may have separate objectives in Anatomy.**
- 7.5 All students in the Schools of Medicine will be required to follow a course in Skills training (MD280) over the first five (5) semesters of Phase I.
- 7.6 All students will be required to follow and pass Course Examinations in Communication Skills and any other Foundation Course(s) approved by the University. No student will be allowed to graduate until (s)he has passed the examinations in these courses.

8. Examinations - General

- 8.1 A student shall not be approved by the Examiners in any one part or section of an examination unless (s)he attended all of the required coursework tests and written practical and oral examinations in that part.
- 8.1.1 All students must register for the examinations on completion of the courses subject to 7.2. Failure to register will carry an absent/failed penalty.
- 8.2 A student repeating an examination may be credited by the Board of Examiners with the coursework marks where applicable.
- 8.3 The Board of Examiners may recommend referral for up to one year where the poor overall performance of the student warrants this action.
- 8.4 A student may be credited with the part(s) of the examination in which (s)he has satisfied the examiners for a period not exceeding eighteen (18) months.
- 8.5 The Faculty may require a student who has not passed a Phase examination within one year of completion of that Phase, to withdraw from the Faculty.
- 8.6 In all Schools, except the Pharmacy Programme, successful completion of a Phase must be achieved before proceeding to the next Phase, unless the Board of Examiners grants exemption. (Dental students **MUST** complete both PHASES IA and IB in their entirety before proceeding to any part of the Dental PHASE II programme).
- 8.6.1 Pharmacy Programme
- 8.6.1.1 To proceed to Phase IB or Year 2, a student has to obtain a mark of at least 40% in Course PM104 which will consist of an average of scores received in MD10A, MD10B, MD11A, and MD11B. To proceed to Year 3, a student has to obtain a mark of at least 40% in Course PM204 consisting of an average of the score received in MD20A, MD20B, MD21A and MD21B.
- 8.6.1.2 The Board of Examiners of the Pharmacy Programme may allow a student to proceed to either Year 2 or Year 3 once the total score is 40% or greater even if the scores in some individual blocks (MD10A, MD10B, MD11A, MD11B, MD20A, MD20B, MD21A, MD21B) are lower than 40%.
- 8.6.1.3 A student fails to proceed to Year 3 if the marks in PM104 or PM204 are lower than 40%.
- 8.7 A resit examination in Pathology/Microbiology, Pharmacology and Community Health (MD310), where applicable, will be given at the next available sitting to students who fail the course examination.

9. Phase I Examinations - All Schools

- 9.1 Students in all Schools will be evaluated in the relevant courses at the end of each block.
- 9.2 An integrated examination, **Phase IA**, will be given at the end of the second (2nd) semester to cover courses MD10A, MD10B, MD11A and MD11B; and MD10A, MD10B, VM11A and VM11B for Veterinary students.
- 9.3 An integrated examination, **Phase IB** will be given at the end of the fourth (4th) semester for medical students to cover courses MD20A, MD20B, MD21A and MD21B.
- An integrated examination, **Phase IB** (DD106), will be given simultaneously for dental students to cover courses MD20A, MD20B, DD100, DD101, DD102 and DD103.

- In the School of Veterinary Medicine, the **Phase IB** examination will be given at the end of the fourth (4th) semester and will cover the courses listed under 7.4.3, with the exception of Protozoology and Entomology (VM180).
- 9.4 Both Phase IA and Phase IB examinations will be conducted during the months of May and June each year.
- 9.5 Examinations in Pathology/Microbiology, Pharmacology and Community Health (**MD 310**) will be held during Semester 2, Year 3, as **Phase IC Examinations**.
- 9.6 Examinations may consist of written papers, which may include essays, multiple choice questions, practicals and/or orals.
- 9.7 The OSCE (Objective Structured Clinical Examinations) (MD 280) will be held during **Semester 2 of Year 3**, and will be for dental and medical students only. Results will be recorded as pass or fail only. Students who fail the OSCE on the first attempt may be allowed by the Board of Examiners to resit the examination **before the beginning of the following academic year**.
- 9.8 In Years 1 and 2 of the Phase I Programme in the Schools of Medicine, Dentistry and Veterinary Medicine:
- 9.8.1 A student who fails to achieve the passing grade in Phase IA or IB examinations at the first attempt will be required to repeat the failed examination. The repeat examination will be held during the month of August. A student who fails to achieve the passing grade in Phase IA or IB examinations at the second attempt will be required to repeat the whole corresponding year and to present for the examination held in May.
- 9.8.2 Successful completion of Phase IA must be achieved before proceeding to Phase IB, unless the Board of Examiners grants exemption. This option is not available to dental students.
- 9.8.3 With exceptions to the School of Veterinary Medicine and the School of Dentistry, successful completion of Phase IB must be achieved before proceeding to Phase IC, unless exemption is granted by the Board of Examiners.
- 9.9 In Year 3 of the Phase I Programme in the School of Medicine:
- 9.10 A student who fails to achieve a passing grade in Phase IC examinations will be required to repeat the examination at the next available sitting in August. **A student who fails to achieve the passing grade in Phase IC examinations at the second attempt will be required to repeat the whole year and to present for the examination held in May.**
- 9.11 In Year 2 of the Phase I Programme of the School of Veterinary Medicine:
- 9.11.1 A student who fails to achieve a passing grade in one or two courses in the Veterinary Phase IB Examination will be required to repeat examination(s) in the failed courses at the next available sitting in August. Students who fail any of these courses, in this attempt, will be required to repeat the Year in the failed course(s) only before proceeding to the next Phase.
- 9.11.2 A student who fails in more than two courses in the Veterinary Phase IB examination will be required to repeat the Year in the failed courses.
- 9.12 A student who fails at his/her third attempt will normally be required to withdraw from the Faculty.

10. Phase II Programme

- 10.1 The requirement for entry to the Phase II programme is the successful completion and passes in all courses at the Phase I programme unless Regulation 9.4 is invoked.
- 10.2 In the School of Medicine, Phase II spans two (2) years and includes the study of the following subjects: Internal Medicine (MD300); Child Health (MD301); Community Health (MD302); Psychiatry (MD303); Obstetrics & Gynaecology (MD330); General Surgery (MD340); Orthopaedics (MD341); Otorhinolaryngology (MD342); Ophthalmology (MD343); Anaesthetics (MD344); Radiology (MD345); Dermatology/Therapeutics, Venerology (MD346). There is also an elective period of six (6) weeks.

- 10.3 A student whose clerkship is deemed unsatisfactory will be required to repeat it before the final examination. Repetition of any part of the course will necessitate delay in completion of the entire course.
- 10.4 In the School of Dentistry, Phase II spans six (6) semesters. Courses in this Phase are Oral Pathology including Oral Microbiology (DD204); Dental Public Health and Preventive Dentistry (DD200/201); Oral Diagnosis and Radiology (DD205); Removable and Fixed Prosthodontics; Operative (Conservative) Dentistry including Endodontics (DD203, DD304); Periodontology (DD202/302); Oral and Maxillofacial Surgery including Exodontia, Local Anaesthesia and Pain Control (DD206/301); Oral Medicine (DD300); Paediatric Dentistry (DD209/306); Orthodontics (DD208/305); Human Disease (General Medicine, General Surgery) (DD210/211); Dental Ethics, Law and Jurisprudence (DD307).
- 10.5 The Phase II programme in the School of Veterinary Medicine spans four (4) semesters and covers courses in Avian Diseases (VM201); Diseases of Non-domestic Animals (VM202); Principles of Surgery/Medicine (VM240); Veterinary Toxicology (VM250); Systemic Pathology (VM260) and Clinical Pathology (VM360); Pathogenic Bacteriology/Mycology (VM270); Virology (VM271); Immunology (VM272); Helminthology (VM280); Large Animal Medicine (VM300); Public Health/ Zoonoses (VM301); Community and Environmental Health (VM302); Epidemiology and Biostatistics (VM303); Jurisprudence and State Medicine (VM306); Small Animal Medicine/Ophthalmology (VM310); Food Hygiene (VM321); Veterinary Preventive Medicine (VM322); Theriogenology (VM330); Small Animal Surgery (VM340); Large Animal Surgery (VM341); Anaesthesiology (VM344); Radiology (VM345).

11 Phase II Examinations

- 11.1 In the Phase II examinations, in the Schools of Medicine, Dentistry, and Veterinary Medicine, each candidate must satisfy the examiners in the clinical/practical examinations.

Medicine

- 11.2 In the School of Medicine, Phase II examinations shall be taken at the end of the Clinical Clerkship Rotations, and shall consist of Medicine (including Adult Medicine, Child Health, Dermatology, Psychiatry, Community Health, Therapeutics and Venerology) (MD320/321); Obstetrics & Gynaecology (MD330) and Surgery (including Anaesthetics and Surgical Sub-specialties) (MD340).
- 11.3 The final examinations may, at the option of Faculty Board, consist of written papers and/or multiple-choice questions together with clinical and/or viva voce assessments. Only those students who satisfy the examiners in all parts of the examinations will be deemed qualified to be awarded the MB BS degree.

Pharmacy

- 11.3.1 Pharmacy Programme
- 11.3.1.1 Attendance in an excess of 75% is mandatory in all courses.** Students are required to inform the Office of the Head, Pharmacy Programme **within one week** of any absence from any part of the course. **Late excuses will not be accepted.**
- 11.3.1.2** Examinations will be held on completion of each course either at the end of the semester or the academic year. A student who fails in the examinations of any subject, will be governed totally by the rules and regulations set out for Pharmacy students.
- 11.3.1.3 Integrated Basic Sciences (PM104, PM204)**
- 11.3.1.3.1** Coursework assessment in each course is to contribute a total of 30 marks and the final examination will carry 70 marks per courses. The course mark is the average of scores received in the component blocks.
- 11.3.1.3.2** Procedures for Failure
- Coursework assessment marks out of 30 will be used for examinations in one academic year only
 - For students repeating courses, new coursework marks must be generated.
 - For students trailing courses, the total marks will be out of 70, i.e. MCQ and Essay marks.

- d. Students failing to achieve a passing grade in PM104 or PM204 in May will be required to rewrite only the failed composite courses in August, as a second attempt.
 - e. Students failing the composite course(s) of PM104 or PM204 on the second attempt in August will be required to repeat the failed course(s) during the next academic year and to rewrite the failed courses at the next sitting in May, as a third attempt.
 - f. Students failing on the third attempt will normally be required to withdraw from the Faculty.
- 11.3.1.4** The Continuous Assessment for the following courses Communication Skills, Community Health, Social Sciences, Pharmacy Sciences 1, and Pharmacy Studies 1 will carry a value of 40% and the Final Examinations will carry a value of 60%.
- 11.3.1.5** The Continuous Assessment in all other courses except Pharmacy Studies IV (PM351) and Integrated Basic Sciences will carry a value of 30% and the Final Examination will carry a value of 70%; the written paper 60% and the Oral 10%.
- 11.3.1.6** Pharmacy Studies IV: Research Project & Contemporary Issues (PM351). The research project will carry a value of 70% and Contemporary Issues 30%.
- 11.3.1.7** A student who fails to satisfy the examiners in any course offered during the academic year will be allowed to write the University's annual supplemental examination provided the student made at least 35% in the course. Supplemental examinations will be held within a maximum of twelve (12) weeks after the end of the academic year.
- 11.3.1.8** Students will not be eligible to enter the final year for the BSc Pharmacy Degree unless they have passed all preceding courses.
- 11.3.1.8.1** It is an essential requirement for eligibility for the final examination that students shall have completed all the extramural instructions within the **Outreach Programmes and Pharmacy Practice** and clerkships for a period of twelve (12) months.
- 11.3.1.9** A student who fails two or more courses offered in the same academic year or the same level, will not be eligible to write a supplemental examination and must repeat these courses in the following year.

Dentistry

- 11.4** Phase II dental examinations are held in two (2) parts, namely Phase II (Part 1) and Phase II (Final). The final examinations (Phase IIB) for the degree will be held at the conclusion of the Phase II Programme. Students shall not be permitted to write the final examination until they have passed the Phase II (Part 1) examination and have satisfactorily completed the Phase II (Final) programme of study.
- 11.5** The Phase II (Part 1) examinations are held at the end of semester 6 and cover units DD210/211 General Medicine/General Surgery.
- 11.6** Candidates who fail the Phase II (Part 1) Examinations will be allowed to continue the programme and enter the fourth (4th) year of the DDS programme for **six months only**, during which they **must** pass the re-sit examination in November/December of the same year. Failure at this stage will require dropping out of the DDS programme and repeating the entire third year, including all examinations and internal assessments from the following September, as a third **and final** attempt.
- 11.7** The Phase II (Part 2) Examinations are held in May/June of the final year and cover the following units: Oral Pathology (DD204), Oral Radiology (DD205), Oral Medicine (DD206 & 300), Oral & Maxillofacial Surgery (DD301), Periodontology (DD202 & 302), Conservative Dentistry (DD203 & 304), Prosthodontics (DD207 & 303), Orthodontics (DD208 & 305), Paediatric Dentistry (DD209 & 306) and Dental Ethics, Law & Jurisprudence (DD307).

Veterinary Medicine

- 11.9** In the School of Veterinary Medicine, Phase II examinations will be held in two (2) parts - Phase IIA and Phase IIB. The examinations may consist of written and/or multiple-choice questions and practical and/or oral examinations.
- 11.10** Phase IIA examinations are held at the end of Semester 6 and will cover the following courses: Avian Diseases (VM201); Diseases of Non-domestic Animals (VM202); Veterinary Toxicology (VM250); Systemic Pathology (VM260); Veterinary Microbiology (VM270, 271 & 272);

Veterinary Parasitology (VM180 & 280); Public Health I (VM 301, 302 & 303) and Veterinary Clinical Pathology (VM 360).

- 11.11 Phase IIB examinations are held at the end of Semester 8 and will cover the following courses: Large Animal Medicine (VM300); Public Health II (VM321 & 322); Theriogenology (VM330); Large Animal Surgery & Radiology (VM341 & 345); Small Animal Surgery & Anaesthesiology (VM340 & 344); and Small Animal Medicine/Ophthalmology (VM310).
- 11.12 Students who fail to achieve a passing grade in one or two courses in either Phase IIA or Phase IIB will be required to write repeat examination(s) in the failed courses. Students who fail any of the courses, in this attempt, will be required to repeat the Year in the failed course(s) only before proceeding to the next Phase.
- 11.13 Students who fail more than two (2) courses at the Phase IIA or Phase IIB will be required to repeat the Year in the failed courses.

12. Phase III - Veterinary Medicine Programme

- 12.1 The Phase III Programme will span two (2) semesters (ninth and tenth) and will cover courses in Research Project (VM390), Clinics I (VM391), Clinics II (VM392), Ethics, State Medicine and Jurisprudence (VM306), and Clinical Conferences.
- 12.2 Students are assigned to Clinical Clerkships in the Veterinary Hospital of the School of Veterinary Medicine and at off campus locations.
- 12.3 Students must attend and participate in weekly Clinical Conferences.

13. Phase III Examinations - Veterinary Medicine

- 13.1 Phase III examinations are taken at the end of the tenth semester and shall cover the courses listed in Regulation 13.1.
- 13.2 The examinations may consist of written and/or multiple-choice questions and practical and/or oral examinations.
- 13.3 It is an essential requirement for eligibility for the final examination that students shall have completed sixteen (16) weeks of extra mural instruction/hands on practical training programme, normally outside of the School of Veterinary Medicine, to include clinical practice of not less than sixteen (16) weeks after Phase I.
- 13.4 Only those students who satisfy the examiners in all parts of the examination will be deemed fit for the award of the DVM degree.
- 13.5 Students who fail one (1) or two (2) courses in the Phase III examination will be allowed to write repeat examinations in August in the failed course(s) except if the student failed both Clinics I and Clinics II examinations.
- 13.6 Students failing both Clinics I and Clinics II examinations will be required to repeat the Year in Clinics I and Clinics II courses.
- 13.7 Students failing Clinics I or Clinics II examinations will be required to repeat the Clinical Rotations in the failed course during the long vacation. A minimum of 75% attendance to the clinics is required to write the examination.
- 13.8 Students failing the Research Project will be required to do additional work on the project and re-submit it in August for re-examination.
- 13.9 Students who fail any of the courses, at the August repeat examinations, will be required to repeat the Year in the failed course(s).

14. Internship

- 14.1 In the School of Medicine, upon the successful attainment of the MB BS degree, graduands are required to follow an Internship Programme consisting of clinical rotations for a period of eighteen (18) months prior to certification by the Medical Council as being eligible for full registration to practise medicine.
- 14.2 In the School of Dentistry, upon the successful completion of the DDS degree, graduands are required to follow a Programme in General Dentistry for a period of twelve (12) months prior to certification by the Dental Council as being eligible for full registration to practise dentistry.
- 14.3 In the Pharmacy Programme, upon successful completion of the BSc Pharmacy degree, graduands are required to follow a pre-registration programme for a period of six (6) months prior to certification by the Pharmacy Board as being eligible for full registration to practise pharmacy.

15. Grading Scheme

15.1 Grading Scheme for MB BS, DDS, DVM degrees (Up to Class of 2007)

GRADE	PERCENTAGES
A	75 and over (Distinction)
B ⁺	65 - 74 (Honours)
B	60 - 64 (Pass)
C	50 - 59 (Pass)
	F < 50 (Fail)

For students entering the Faculty in 2003 (Class of 2008) and beyond the following Grading Scheme is to be implemented:

GRADE	PERCENTAGES
Distinction	80% (A)
Honours I	75% (B+)
Honours II	70% (B)
Pass	50% (C)
Fail	< 50% (D)

15.2 Grading Scheme for BSc Pharmacy degree

GRADE	GRADE POINTS
A+	4.3
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
S	Supplemental
F	Under 35 0.0

S - Supplemental
F - Fail

16. Eligibility for the Degree

- 16.1 A student is eligible for the award of MB BS or DDS or DVM degree following satisfactory completion of the relevant courses and passing the necessary examinations. A student becomes eligible for the following awards:
- MB BS (Honours) by obtaining a minimum of seven (7) honours/distinction grades, with at least five (5) from the Pre-clinical Sciences Courses; two (2) each from Phases IA and IB courses; and **two (2)** from Phase IC (Para-clinical Sciences Courses) and **Phase II** Clinical Sciences subjects.
 - DDS (Honours) by obtaining seven (7) or more honours grades in the courses examined of which at least four (4) must be from Phase I examinations.
 - DVM (Honours) by obtaining ten (10) or more honours grades in the courses examined of which at least four (4) each must be from Phases I and II and at least one (1) from the Phase III examinations.
 - MB BS (Distinction) by obtaining a minimum of seven (7) distinction grades, with at least five (5) from the Pre-clinical Sciences Courses; two (2) each from Phases IA and IB courses; and two (2) from

Phase IC (Para-clinical Sciences Courses) and Phase II Clinical Sciences subjects.

- e) DDS (Distinction) by obtaining seven (7) or more distinctions in the courses examined of which at least four (4) must be from Phase I.
- f) DVM (Distinction) by obtaining ten (10) or more distinctions in the courses examined of which at least four (4) each must be from Phases I and II and two (2) from Phase III.

16.1.1 A student is eligible for the award of a BSc Pharmacy Degree on the attainment of 120 credits.

16.1.1.1 A student becomes eligible for the award of an Honours degree by maintaining a minimum B average and passing at least 54 credits in levels II and III courses at the first attempt.

16.1.1.2 The class of degree will be determined by the number of quality points a student has accumulated in the best 90 credits obtained in academic years 2-4. The grades would be converted to quality points as follows: Quality points = (grade point x course credits) ÷ 3

16.1.1.3 The degree will be awarded according to the overall quality points as follows:

First Class Honours:	105 points and above
Second Class Honours:	
Upper Second Class:	90 - 104
Lower Second Class:	60 - 89
Pass:	40 - 59

A candidate will not be awarded a degree with Honours or Distinction unless he/she passes all Phase examinations at the first attempt.

17. Awards

After the Senate has approved the Pass List, an appropriate document under the Seal of the University shall be awarded to each successful candidate.

Approved by the Board of the Faculty of Medical Sciences - St. Augustine on December 04, 1997 and by the Board for Undergraduate Studies in July 1999 and July 2001.

BSc Nursing (BSc N) **(Provisional Regulations)**

The BSc N degree will begin during the Academic Year 2004/2005 with an expected intake of a minimum of 25 full-time students. Arrangements will be made for the entry of part-time students in subsequent years. The Curriculum will be designed so that it can be completed on a full-time basis in a minimum of two years, consisting of four semesters, with courses available in 'summer' sessions. Courses will be offered in a programme of teaching, outreach programmes, nursing practice, and clerkship. The various professional Nursing Councils in the region can then arrange a period of internship to fulfil any relevant requirement in the placement of graduates.

Entry Requirements

The entry qualifications of applicants will be assessed on a point system in which credits will be allocated for previous training in Nursing. Applicants for admission to this course of study will be required to satisfy the minimum standards for entry to the degree programme, as set out by the University Regulations governing matriculation as follows.

General Requirements

Applicants must be holders of the General Certificate (GCE) Ordinary (O) level, the Caribbean Examination Council (CXC), or approved equivalents, with five subjects, of which two (2) must be at the Advanced level or equivalent; or passes in four (4) GCE subjects or approved equivalents, of which at least three (3) must be at the Advanced level or equivalent.

Special Requirements

Applicants would have completed the basic or general qualification in Nursing: a certificate, a diploma or an Associate Degree with a minimum passing grade of B or its approved equivalent, and would be registered Nurses. Entry qualification of applicants, when assessed by the admissions team, must be equivalent to a minimum of 30 credits. During the first five (5) years in which the degree is offered, applicants must have had a minimum of three (3) years post-registration experience as a practising nurse.

Candidates with Certificates, Diplomas or Associate degrees with a grade lower than the approved grade, upon recommendation from the registration body or equivalent authority, if approved for entry, will be required to write a challenge examination. In this regard, prospective students who have already passed this challenge examination at the Mona campus, and have been awaiting entry, will be considered as meeting this special requirement.

In all the above cases, candidates must indicate by transcript or certificate, previous exposure to the study of Chemistry. Candidates may be given provisional acceptance when they do not possess this specific requirement only, but will be advised to obtain it while awaiting entry; where it is mutually convenient, a remedial programme of integrated science will be offered to these candidates during or before their training.

Such candidates can access the necessary requirement at the Pre-Health Professional Programme of The School of Continuing Studies as a special student.

Candidates with additional post-basic qualification in Nursing, from programmes offered by The University of the West Indies, or other recognised tertiary institutions, will be considered for admission on a preferential basis but must have also obtained a minimum grade of B in major course components of their post-basic training.

Provisional acceptance may be offered in the case of other entry requirements subject to the approval of an Advisory Committee that would assess and recommend the prerequisite courses of study to be pursued prior to admission.

Final selection of successful candidates will be based on an interview by a specially selected panel.

On successful entry into the programme, all students will be assigned to a Student Advisor. Advisors will counsel students on their plans for personal and professional development, while challenging them to maximise on the learning opportunities available during the programme.

Regulations

Exemptions

Exemptions from courses offered during the programme will be entertained by the University for persons who have completed a similar or equivalent course from a recognised tertiary institution after application and approval by an Advisory Committee of the School of Advanced Nursing. Exemption may be granted on the basis of the syllabus previously covered, the nature and duration of the course, and the student's grade in the examination, and whether such a course is equivalent in whole or part to that offered in the programme. The Head of Department, through the Dean of the Faculty, shall make one of the recommendations to the Faculty Board indicating the reasons for such recommendation:

- *that the student may be exempted from the course, or be exempted from both course and examination*
- *that the student may be exempted from a part or whole of the course, but be required to take a part of, or the full examination.*
- *that credits already accumulated will be transferred to the present programme*

Debarments, Repeats, Withdrawals

Where there is dissatisfaction with a student's performance, the Head of a Department will report the matter through the Dean to the Faculty Board, which may recommend that the student be debarred from the examination, and either repeat the course or be required to withdraw from the programme.

In all cases, but especially in cases of repeats, students' performances will be assessed at the end of two (2) semesters. Based on the review, a recommendation will be made to Faculty Board by the Head of the School of Advanced Nursing concerning the case of unsatisfactory performance of those students with a course grade of less than 40%. Faculty Board may recommend that the student:

- Repeats the courses
- Withdraws from the programme

University Required Courses

Language and Communication Proficiency: All students will be required to follow and complete satisfactorily the Courses in Communication Skills for Health Personnel (CM10A, CM10B) and one other Foundation course of The University of the West Indies.

Examinations

Examinations will be held at the end of each year on the courses completed during that year. A student who fails in the examinations of any subject, will be governed totally by the rules and regulations set out for examinations of nursing students

Examinations shall consist of written papers, coursework, and objective testing, projects, research studies, objective structured clinical examinations (OSCE) and orals, the latter being at the discretion of the Examiners. In addition, Examinations may be conducted on outreach programmes, and clerkships in relevant settings.

Continuous assessment conducted for stipulated courses, will carry a value of 40% for the whole year, while the Examinations will carry a value of 60% for the end of the year. Students must maintain a minimum of 60% in courses that are specific to Nursing.

A student who fails to satisfy the examiners in any course offered during a semester will be allowed to write a supplemental examination at the end of the academic year in which the course was taken, if the student has made at least 35% in the course. Supplemental examinations in the Nursing programme will not be given to the students with marks less than 35%.

A student who fails the supplemental examinations will be required to repeat the courses failed. Students who fail in a second attempt will be required to withdraw from the programme. A supplemental examination will not be considered as a second attempt.

A student who fails two (2) or more courses within a semester will not be eligible to write a supplemental examination and must repeat these courses in the following year.

A student who fails two or more courses offered in two successive semesters may be required to withdraw from the degree programme.

A satisfactory level of performance evaluation, as defined in the above Regulations, must be achieved within each year of completion of the course of study for that year. A student who fails to meet this condition in two (2) successive years will normally be required to withdraw from the Faculty.

Students must attend the courses of study in the order prescribed in the Regulations. They will not be eligible to enter for final examinations for the BSc N degree unless they have passed all the courses preceding the final examinations.

Students are required to inform the Office of the Head of the School of Advanced Nursing within one week, of any absence from any part of the course.

Each course will be awarded Grades with an assigned grade point, on the basis of the overall course marks as follows:

LETTER GRADE	GRADE POINT
A+	4.3
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
F	

Eligibility for the Degree

A student is eligible for the award of BSc N upon completion of the relevant courses, that is following the course of study outlined, and passing the necessary examinations. It is an essential requirement for eligibility for the final examinations that students shall have completed all the extramural instructions and clerkships, and Nursing practice components of the programme. Students are required to have maintained a minimum level of 40% in the components of training associated with Nursing.

Award of Degree

A degree will be awarded to students who have covered 110 credits or more, students having entered the programme with a minimum of 30 credits of basic qualifications. The remaining 80 credits will be obtained from the BSc N Programme. The Class of Degree will be determined by the number of quality points a student has accumulated in the 80 credits covered in the programme.

The degree will be awarded with honours according to the overall quality points.

[Quality points = grade point x course credits].

The class of degree will be awarded as indicated:

GPA	Class of Degree
> 3.6	First Class Honours
3.0 - 3.59	Upper Second Class Honours
2.0 - 2.99	Lower Second Class Honours
1.0 - 1.99	Pass

The final results will be published as a pass list according to the class of degree obtained with the names listed in alphabetical order.

4. UNIVERSITY REGULATIONS FOR THE RE-ADMISSION OF STUDENTS REQUIRED TO WITHDRAW

1. Students required to withdraw from the University for failing to complete their degree programme within the stipulated period may be re-admitted to the Faculty after at least one year has elapsed since their withdrawal. Students thus admitted to the Faculty may, in accordance with its Regulations, be granted exemption from Year 1 Part 1 Introductory courses subject to there being no change in the content of the courses and provided that no more than five years have elapsed since the date of withdrawal. Year 2 University courses, for the purposes of exemption, may be treated in the same way as Year 1 Faculty courses.
2. Students whose performance in the Year 1 programme indicated general weakness (e.g. bare passes in all courses) may be required by the Faculty to repeat the First Year Programme.
3. Under special circumstances, exemption from courses in Part 2/Advanced Part of the Degree programme may be proposed by the Faculty, provided that on re-admission the student is required to take at least a full load for one year. The maximum time allowed for completion will be two year's full load.
4. Students required to withdraw from the University for failing to complete their Year 1 or Year 2 degree programme (Part 1 or II etc.) within the stipulated period or for poor performance as provided for in the Faculty regulations, may be re-admitted to the Faculty after at least one year has elapsed since their withdrawal. Students thus re-admitted may be granted exemption from Year 1/Part 1/Introductory courses and/or Part 2 Advanced Part courses subject to Regulations 1, 2 and 3 above.
5. Students from one Faculty who had been required to withdraw from the University for failing to complete their degree programme within the stipulated period may be immediately admitted to another Faculty. Such students may be granted exemption from Year 1 courses relevant to the new programme subject to Regulations 1 and 2 above.

Students required to withdraw from the University for failing to complete their Diploma or Certificate Programme may be re-admitted to the Faculty after a minimum period of two years has elapsed since their withdrawal. Such students shall not be granted exemptions from courses in the programme previously passed.

5. FOUNDATION COURSES

With effect from September 1998 all new first-year undergraduates will be required to complete a minimum of 9 credits of Foundations Courses. Communications Skills I and II offered in Semesters 1 and 2 will count for a total of six credits. Students are also required to choose one of FD11A – Caribbean Civilisation or FD13A – Law, Governance and Society.

COURSE DESCRIPTIONS

FD11A CARIBBEAN CIVILISATION (Semester 1 Only)

Objectives:

1. 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.
2. To develop a perception of the Caribbean as wider than island nations or linguistic blocs.
3. To simulate students' interest in, and commitment to Caribbean civilisation and to further their self-definition.

Modules:

1. **Origins**
Caribbean space/physical environment/Amerindian peoples and Cultures; their legacy. European conquest, settlement and demographic changes.
2. **Fighting for Freedom**
Slavery, marronage and rebellion.
New in/out – migration, indenture and their consequences: 19th and 20th centuries.
3. **Quest for Identity**
Race and nationalism.
Independence, dependence and regionalism.
Creolisation and ethnic identity.
4. **Ideas, Ideologies and Theologies**
Education / religion in the Caribbean.
Caribbean Intellectual Traditions.

5. **Caribbean Expressions**

Caribbean music – Calypso, Reggae.
Caribbean festivals.
Sports.
Caribbean voices – French, English, Spanish, Linguistics
Identity

EVALUATION: Final 2-hour examination – 100%

This course is offered in Semester 1 only

**FD13A
LAW, GOVERNANCE, ECONOMY AND SOCIETY
(Semesters 1 and 2)**

This is a multi-disciplinary course of the Faculty of Social Sciences at St. Augustine. It is designed mainly for non-Social Science students. It is a **3-credit, 1-semester** course.

The course will introduce some of the major institutions in Caribbean society. It exposes the student to both the historical and contemporary aspects of Caribbean society, including Caribbean legal, political and economic systems. In addition, Caribbean culture and Caribbean social problems are discussed.

Communication Skills

78 hours

CM 10A Communication Skills for Health Personnel (3 credits)

CM 10B Communication Skills for the Health Professions (3 credits)

**CM10A
COMMUNICATION SKILLS
FOR HEALTH PERSONNEL
(3 CREDITS)
(Semester 1)**

This course uses a skills approach to the practice of effective communication in health settings. Students will be able to function effectively as individuals in public, small group and face-to-face interactions with persons seeking health care. They will also be able to communicate effectively in writing across a range of forms necessary to the health profession.

Course Structure

Lectures and Workshops.

One two-hour and one single-hour session for thirteen (13) weeks (**39 hours**).

Course Objectives

Participants in this course will be able to:

1. Identify the major elements in the communicative process and their purposes;
2. analyse the communicative process specific to the needs of health personnel;
3. recognise the application of the principles of effective communication in a variety of health contexts;
4. communicate effectively in the oral mode with:
 - a. other health personnel
 - b. patients/clients/other members of the public;
5. conduct an interview and participate effectively in a discussion group;
6. communicate effectively in writing modes necessary to the health professions.

Course Outline

Unit 1

The nature of communication; its purposes.
Models of communication. Verbal versus non-verbal communication. Communicative competence in a medical context; socio-psychological factors which impinge on successful communication, use of media and culture.
(6 hours)

Unit 2 Differences between oral and written communicative styles. Analysing audience characteristics and selecting appropriate style levels for different contexts and situations. Recognising the components of successful communication in real-life medical contexts.
(6 hours)

Unit 3 **Effective** oral communication
(a) professional contexts;
(b) patient/client contexts. *(Practical)*

a. i. **The discussion group:** small and large group characteristics; leadership versus participant qualities; group dynamics.

a. ii. **Oral presentation:** planning and organising the presentation; assessing audience characteristics and responding appropriately; dealing with anxiety.

b. **The medical interview:** techniques; appropriate distancing; formulating questions and responses; dealing with delicate issues.
(15 hours)

Unit 4 Effective written communication.
Letters memoranda, instructions, reports etc: organisation structure and format. Technical vs. non-technical presentation: scientific language, medical and legal jargons and their appropriacy range.
(12 hours)

(Units 3 and 4 will be integrated in application).

Method of Assessment

50% Examination

50% Coursework -

- 1 oral presentation (10%)
- 1 interview discussion presentation (group simulation) (10%)
- 1 report (15%)
- 1 essay - application of theory to a practical situation (10%)
- 1 letter or other minor piece (5%)

Communication Skills for the Health Professions

CM10B COMMUNICATION SKILLS FOR THE HEALTH PROFESSIONS (3 Credits) (Semester 2)

Co-requisite: CM10A

This course uses a skills approach to the application of effective communication principles in counselling and conveying messages in health settings. Students will be able to effectively conduct counselling sessions and use clinical instruction methods. They will also be able to use appropriate strategies and technology to convey messages to patients, clients and other professionals.

Course Structure

Lectures and Workshops.

One one-hour and one two-hour session for thirteen (13) weeks - 39 hours.

Course Objectives

Participants in this course will be able to:

1. apply principles of effective communication to counselling and clinical instruction situations, and to professional interactions;
2. identify characteristics of effective counselling;
3. demonstrate effective counselling techniques and referral strategies in clinical settings;
4. convey sad news to a patient or client;
5. select appropriate methods and strategies for clinical instruction and patient education;
6. develop an appropriate strategy and use technology to convey a message to a mass audience.

Course Outline

Unit 1 Counselling communication and its prerequisites. Characteristics of effective counselling. (Role-play and critiquing. Psychosocial scenarios). **(9 hours)**

Unit 2 Conveying sad news: health care worker/client/patient relationships. Truth disclosure, ethics and confidentiality. Techniques for releasing sad information, expressing condolences. **(6 hours)**

- Unit 3**
- a. Methods and strategies for clinical instruction. Seminars. Small group team teaching. Video discussions. Making instructional objectives. Evaluation and feedback.
 - b. Methods and strategies for patient education.
(12 hours)

- Unit 4**
- Communication strategies and technology. The use of media and graphics. Message delivery and social marketing of information.
(12 hours)

Methods of Assessment

50% Examination

50% Coursework -

- Unit 1:
essay based on case study (individual) 10%
- Unit 2:
role play/dramatised oral presentation (pair) 10%
- Unit 3A:
oral presentation (group but individual grading) 10%
- Unit 3 B:
oral presentation (individual) 10%
- Unit 4:
written outline and oral presentation based on a study of a real-life case or situation (group) 10%

6. OBJECTIVES OF THE MB BS

It is expected that on completion of the MB BS programme, the graduates will have attained knowledge, attitudes, and skills as described in the following five areas:

I. Basic Medical Sciences

- obtain basic information on body systems;
- acquire a scientific approach for actions from hypotheses, which lead to self-directed learning, as well as prognosis, diagnosis, and therapy with respect to medical conditions in both sexes;
- process information on normal and abnormal function in molecular, somatic, biological, mental, and social structure and function in deriving diagnosis;
- utilise information technology for information management in medical education.

II. Clinical and therapeutic methods, procedures, and investigations

- demonstrate competence in the management of medical emergencies including first aid and perform simple clinical procedures;
- assess the health status of individuals and groups through observation and data collection from sources including the medical history, clinical examinations, laboratory investigations, and significant others within the dynamics of patients' relationships;
- engage in medical problem-solving process in order to derive a clinical diagnosis;
- prepare and/or implement a plan of patient management and care including appropriate referral.

III. Community Health and Family Medicine

- demonstrate sensitivity and respect for the rights of individuals and groups in a multicultural society;
- maintain effective doctor-patient relationships especially those involving patient education;

- collaborate with individuals and communities in identifying and achieving defined health goals;
- utilise epidemiological data, and cultural determinants of health in appraising the level of wellness, illness and health in a society;
- apply the principles of epidemiology and public health and an awareness of the social impact of illness to the practice of medicine in the community.

IV. Communication Skills

- communicate effectively with patients, families, and other members of the healthcare team;
- prepare clear and concise records, reports, letters of referral and other patient related documents.

V. Professional competence

- knowledge of the healthcare system and ethical/legal issues, socio-economic conditions that impact on the provision of care;
- critically appraise the published scientific literature;
- keep abreast of social, medical, and technological advances through participation in continuing medical education and research;
- practice medicine within the ambit of professional medical ethics and the law;
- maintain quality assurance initiatives;
- function as a member of the healthcare team.

Specific Objectives

Integrated Basic Medical Sciences

- To acquire a scientific approach to decisions for diagnosis, therapy, and prognosis on health conditions;
- To apply relevant knowledge from the biomedical and behavioural sciences to the care of individuals, families, and groups in the community and hospital settings;

- To utilise informatics in the management of medical information as well as office practice;
- To differentiate normal and abnormal structure and function in biomedical, somatic and mental operations of the human body system, male and female, throughout the life cycle;
- To recognise the progression in the disorder of human function because of the biology of disease.

Communications

- To prepare clear and concise records, reports, letters of referral and other patient-related documents;
- To communicate effectively with patients' families, and other members of the health care team;
- To conduct patient education especially in areas of child health and chronic diseases;
- To enhance the doctor-patient relationship through effective communication skills;
- To engage in referral and consultation with other members of the health care team to the benefit of the patient.

Family and Communication

- To empower individuals, families, and communities to develop self-reliance regarding their own health care;
- To plan and/or engage in health promotion activities aimed at promoting healthy lifestyles in individuals and communities;
- To collaborate with individuals and communities in identifying and achieving defined health goals;
- To apply the principles of public health and epidemiology with an awareness of the social impact of illness on the practice of medicine in the community;
- To demonstrate sensitivity and respect for the rights of individuals and groups;
- To appraise critically the folk tradition's alternative therapies related to the health that exists within a community.

Clinical Methods and Procedures

- To demonstrate competence in the initial management of medical emergencies, especially as a first responder;
 - To engage in effective medical problem-solving and clinical diagnosis;
 - To assess the health status of individuals and groups through observation and data collection by way of - medical history, clinical examination and laboratory findings;
 - To perform simple clinical procedures;
 - To prepare to implement a management plan including appropriate referral;
 - To involve the patient and family in the plan for care and utilise cultural determinants of health in assessing the health and wellness status of communities;
 - To prescribe therapeutic methods on the basis of appropriate investigative procedures;
 - To recognise the role of nutrition in maintaining wellness, prescribing diet therapies where they are relevant.
- To function harmoniously and constructively as a member of the multi-disciplinary team within the health sector and between the health sector and other sectors of the society;
 - To participate in planning, organising, directing and evaluating health care;
 - To engage in quality assurance initiatives;
 - To prescribe health care with a consciousness of the socio-economic conditions among individuals and communities.

Professional Competence

- To participate in health care research;
- To practise medicine within the ambit of professional medical ethics and the law;
- To keep abreast of social, medical, and technological advances through participation in continuing medical education;
- To critically appraise the published scientific literature;
- To be accountable for professional and personal actions in the care of patients;
- To participate willingly in the training of other health care workers;
- To evaluate the results of treatment procedures and to follow up with appropriate feedback;

7. SCHOOL OF BASIC HEALTH SCIENCES

PHASE I PROGRAMME FOR CLASS OF 2003 AND BEYOND ONLY

NEW CURRICULUM

BASIC HEALTH SCIENCES

Basic Health Sciences courses include Anatomy, Physiology, Biochemistry, Pathology, Pharmacology and Community Health as far as they can all be integrated into a holistic programme. In Anatomy, gross anatomy, radiological and surface anatomy, and neuroanatomy are incorporated. The courses are delivered through blocks or modules (coded as MD10A and MD10B; MD11A and MD11B; MD20A and MD20B; MD21A and MD21B; and MD310) over five (5) semesters. Information will be acquired through large group lectures, laboratory demonstrations, Problem Based Learning sessions, students' self-directed study, training in the skills laboratory, as well as through the medium of integrated clinical presentations. The courses are arranged on an organ system approach and facilitate the integration of basic medical sciences with clinical sciences.

MD10A ENVIRONMENT AND HEALTH

This foundation course is a prerequisite to all the other courses in the Basic Health Sciences Course; it is designed to meet the requirements of basic knowledge of the Basic Health Sciences curriculum. The eukaryotic cells that form multicellular animals and plants are complex interdependent entities, which live in communities and exhibit varying degrees of specialisation. The elaboration of multicellular organisms has selective advantages by affording an increase in size and the range of specialisation for movement, sensory detection, homeostatic control, communication, and social organisation. These innovations enable eukaryotic organisms to compete, propagate, and survive in more complex ways in diverse environments. Students will be required to cover the study of eukaryotic cells, the anatomy of various cell types, tissues, and organs, and the biochemistry, physiology, pathology, and pharmacology of normal and disease states. Of importance, is that students appraise the ways in which organisms cope with changes in the external environment and preserve constancy of the internal environment. Concepts of health, illness and disease, and epidemiology will be highlighted.

MD10B BASIC PARA-CLINICAL SCIENCES

During this course, students will be required to describe the structure and function of the haematopoietic and immune systems. The morphological and physiological changes in cells and tissues in response to disease will be covered. The structure and pathogenic mechanisms of microbes associated human and animal disease will be delivered.

The students will be required to describe the approaches to the laboratory diagnosis of disease. The Health Field concepts with biological, environmental and social determinants of health will be highlighted. In addition, the health care delivery system will be appraised with an emphasis on ethical issues and the role of the caregiver.

MD11A DIGESTION AND METABOLISM

The purpose of this course is to enable students to acquire knowledge and develop in-depth understanding in the areas of Nutrition, Absorption, Digestion, Metabolism, and Pharmacology. In Nutrition, students cover the essentials of good nutrition and the metabolic requirements at all stages of the life cycle, the role of various components of the diet and their effects on blood chemistry and nutrition-related diseases in the Caribbean. The assessment of nutritional status, nutritional elements important for the formation of healthy dentition and environmental factors that impact on nutrition as well as the concepts of malnutrition including obesity are covered. In Digestion and Absorption, the basic science concepts related to the Anatomy, Histology, Embryology, Physiology and Biochemistry of mastication, deglutition and digestion; the basic electrical and mechanical properties of smooth muscle in the wall of the gastrointestinal [GI] tract, the coordination of motor patterns of the oesophagus, stomach and the intestines, including the reflexes which govern vomiting and defaecation will be incorporated as well as the disturbances of the above patterns, e.g. those that can occur after surgery. New concepts on the role of gut hormones on GI function will be included. In Metabolism, protein, fat, carbohydrate and mineral metabolism (including the role of the liver in these processes) will be discussed; whereas in Pharmacology, the use of drug therapy in acid related disorders, parasite infestation, drug therapy of constipation, vomiting, diarrhoea and other gastrointestinal infections will be described.

MD11B [MDSC1102] CARDIOVASCULAR AND RENAL

This course covers the gross anatomy, histology and embryology of the heart. It also covers the embryology, gross and microscopic anatomy of the blood vessels, the lymphatics, the kidney and the urinary tract. The mechanisms and regulation of cardiac and renal functions, blood pressure, and lipid transport, the body fluid compartments and acid-base balance and risk factors for cardiac disease are also incorporated into the course. The thoracic cavity and the mediastinum will also be studied.

The course includes laboratory sessions on the above areas, including cardiovascular evaluation by ECG recording and autonomic control of the cardiovascular system. The separation of blood lipids using chromatography and the determination of cholesterol and ATP synthesis and action are also incorporated into the practical sessions. The biochemistry of lipids and lipoproteins will also be covered in this course.

Skills training sessions on history taking and physical examination of the cardiovascular and the renal systems will also be conducted during the course.

MD20A [MDSC2001] RESPIRATION

This course on human respiration, which is offered in the first semester of Year 2, is of five weeks duration.

Although there is a stronger emphasis on Physiology, through its concepts and principles, the other pre-clinical disciplines of Anatomy and Biochemistry play an important role in this integrated course. Public Health and Primary Care concerns, including respiratory insults occasioned both by domestic and industrial factors, their impact on the human respiratory system and current management strategies will also be addressed. The disciplines of Pathology & Microbiology and Pharmacology are included insofar as they facilitate holistic learning.

The course is delivered predominantly through Problem Based Learning (PBL) sessions, but also comprises core lectures and laboratory exercises. End of course and end assessment may encompass all of the foregoing modalities. Detailed information is provided in the PBL booklets, which will be distributed at the beginning of the course.

MD20B [MDCS2002] NEUROSCIENCES AND BEHAVIOUR

Processes within the Central Nervous System (CNS) all work together to facilitate perception, memory, and man's ability to learn, in addition to the control of vegetative functions and the coordination of muscle activity as man interacts with others and the environment. Dysfunction in the CNS accounts for many abnormal states, both psychiatric and neurological. This course endeavours to facilitate learning on how the nervous system functions, and the rationale for treatment of its dysfunction. The development, structure, and function of the CNS will be covered. The way in which heredity and environment affect development or maldevelopment of the individual and the family will also be appraised. Attention will be given to various neural pathways involved in autonomic activity, the regulation of various biological rhythms, and sensory perceptions. The use of knowledge of functional localisation in the CNS to establish pathological states will be explored. The concept of cerebral circulation and the control of cerebral blood flow in normal and disease states will be described along with the ways in which neoplasms and the infective and toxic agents affect nervous tissue.

MD21A [MDCS2101] ENDOCRINE AND REPRODUCTION

This course highlights the homeostatic control of the human body by the endocrine system, which is composed of ductless glands distributed in a variety of tissues throughout the body. The secretory products (hormones) of these glands are generally transported by the blood's vascular system to remote sites of action. Students will be introduced to the anatomy of the hypothalamic - pituitary axis and the histology of the various endocrine glands, the mechanism of action of hormones and the regulation of metabolism and other biochemical and physiological processes by hormones and the concept of receptors in signal reception and transduction, and their mode of action. In addition, the role of hormones in negative and positive feedback control of human reproductive systems will illustrate the inextricable link between the gonads (testes and ovaries), and the hypothalamic - pituitary axis. The relationship between the endocrine and nervous system will also be discussed and various pathologies involving defects in receptors or at various post-receptor points in the cell-signalling pathway will also be presented.

MD21B [MDCS2102] MUSCLES, BONES, AND JOINTS

This course is of seven (7) weeks duration and is offered in Semester 2 Year 2. Students will be exposed to the integrated teaching of three pre-clinical disciplines- Anatomy, Biochemistry and Physiology, which will enable them to acquire knowledge and understanding of the functional morphology of the human loco-motor apparatus.

Emphasis will be given to the study of gross and microscopic anatomy and the embryology of muscles, bones and joints comprising the musculo-skeletal system. An interpretation of radiological images of bones and joints, the functional tests of the principle muscles, the physiological and molecular basis of muscle contraction and the energy sources used in the functioning of various types of muscle cells, the effect of hormones, vitamins and other factors on muscles, bones and joints are among important objectives for this course.

The most common lesions of bones, joints and muscles, the principles of myography, the drugs that act primarily on bones, skeletal muscles and neuromuscular junctions and their clinical and applied aspects are also included with the objectives in Pathology and Pharmacology, since they facilitate learning in a holistic manner. The course is delivered through PBL sessions and large group exercises, including lectures, labs and basic science demonstrations.

MD 310 [MDCS3310] PATHOLOGY-MICROBIOLOGY/ PHARMACOLOGY/COMMUNITY HEALTH

This course is run over the two semesters in Year 3 of the Phase I programme. Teaching is delivered by lecturers, PBL sessions and practical sessions in the diagnostic laboratories.

The course covers the aetiology, biochemical basis, pathogenesis, the clinical features, laboratory diagnosis and drug management of the common diseases that affect all human organ systems.

Measures to prevent and control the diseases are explored in this course together with the Community Health programme of the same year.

MD280 [MDSC1281]

SKILLS TRAINING

This course seeks to adequately prepare students to practise the art and science of clinical medicine in their continuing training at the highest ethical standards, with mutual respect for colleagues and with due regard for the rights of patients, and the importance of the team approach to the delivery of healthcare. Throughout the course, which spans five semesters, students will be required to relate the practice of clinical skills to the relevant areas of the basic sciences curriculum thereby reinforcing their capability for diagnosis of health conditions. Semester 1 will involve students in the practice of first aid skills to the level of the International Red Cross, at first through peer observation and with peers as models. Training will be conducted in the Skills Laboratory as well as through site visits. Students will practise with models and kits and also with simulated patients. Teaching of clinical skills will be supplemented by large group lectures as well as through self-directed approaches with audiovisual and computer generated models in the Medical Sciences Library.

SKILLS LAB

195 hrs

Specific Information

The objective of the current Skills training programme for medical and dental students is:

To introduce medical science students to some of the skills which they will require as future generalist practitioners, and to strive toward a smoother transition from Phase I to Phase II for both students and staff.

The skills referred to include:

history taking skills
system-based clinical skills
relevant motoric skills

- suturing
- urinary bladder catheterisation
- digital rectal examination
- blood pressure measurement
- intramuscular injection
- intravenous infusion
- basic life support
- interpretive skills
- radiology

The Skills training programme, which runs parallel to the PBL blocks in the School of Basic Health Sciences, employs several modes of instruction, including standard medical equipment, models, mannequins, simulated and real patients, which are all invaluable adjuncts to teaching and learning during the basic science phase. Year 1 students are taught and given to practice broad-based skills, while Years 2 and 3 are given a system-based approach (vide infra).

Skills training Programme

YEAR 1

SKILL	History Taking Basic Life Support Suturing
RESOURCE	Simulated patients Anaesthetic equipment Arm models

YEAR 2

SKILL	System-based
RESOURCE	Simulated and real patients

YEAR 3

SKILL	System-based Revision/Evaluation
RESOURCE	As for Year 2 As above/OSCE Relevant models

Basic relevant Radiology is taught during each system-based block.

The Skills training programme in the School of Basic Health Sciences culminates in assessment by way of the Objective Structured Clinical Evaluation (OSCE), which Phase I students must pass prior to proceeding to Phase II. *Students will not be allowed to begin Phase II unless they are successful in the OSCE, even if they have passed the Phase I theory examinations.*

Skills training are at present also available for Years 4 and 5. Fourth (4th) year students may, in groups, arrange simulated patient encounters in the Skills lab, for the purpose of honouring their history taking skills on the wards. In Year 5, training in Advanced Life Support is given, using resuscitation models and equipment during the Anaesthetic clerkship.

General Information

1. Students interfacing with simulated and real patients, who are professionals in training, will be expected to adhere to an appropriate dress code.
No student will be allowed to enter the Skills lab dressed in caps, shorts, jeans, T-shirts, sandals, slippers, sneakers etc. Students are required to wear lab coats over acceptable “street” clothing.
2. Students are expected to arrive at the Skills lab at least five minutes before the scheduled start of each session, in order to register with the Skills lab secretary before the session. This is necessary for the smooth operation of the several classes being held at the same time.
3. Students must bring to the Skills Laboratory their own stethoscope and penlight Skills lab for the relevant system-based portion of the training programme as these items are not provided by the Skills lab.
4. A short manual on basic history taking will be given to each student at the first Skills lab session in Year 1. (This manual is complimentary but if lost or misplaced can be replaced for a small fee.)
5. Guidelines for the Skills training programme will be provided to all first year medical and dental students at a nominal cost, and will contain detailed information on the areas to be assessed throughout the programme.
6. A Clinical Skills training Manual is also available at the UWI Bookshop, on the main campus.

8. SCHOOL OF MEDICINE

PHASE II CLINICAL CLERKSHIP PROGRAMME (YEARS 4 AND 5)

INTRODUCTION

On successful completion of the Phase I programme, students proceed to Phase II. This part of the undergraduate programme is based on the well-proven 'clerkship' system, which lasts two (2) calendar years during which groups of students rotate through different clerkships.

The first clinical Year involves students as members of clinical service teams in the disciplines of Medicine & Therapeutics; General Surgery; Child Health; Obstetrics & Gynaecology; Psychiatry and Public Health. The second clinical Year involves additional experience in the disciplines encountered in the first year and provides exposure to other clinical disciplines - Primary Care, Orthopaedics, Otolaryngology, Ophthalmology and Anaesthetics and Intensive Care.

These attachments, with the exception of Child Health and Obstetrics & Gynaecology, will be primarily to clinical firms at local and regional hospitals and health clinics.

In the clerkship rotations of the two clinical years, students continue to develop the clinical skills to which they were exposed in the skills Laboratory and improve their abilities in the clinical reasoning process. Additionally, this exposure is expected to achieve integration of the clinical features of diseases with an understanding of the underlying disorders of normal structure and function and the use and interpretation of laboratory and radiological data in rejecting or confirming clinical hypotheses.

In the Clerkships, the students are exposed further to the factors which inform a rational, cost-effective and humane use of the vast armamentarium of therapeutic measures and substances, which are available for the amelioration and cure of disease conditions.

For most of the students, the first exposure to patients in various stages of illness and disease and the impact of such conditions, for both patients and students may be disconcerting and traumatic. It is important, therefore, that the early contacts with patients should be structured and guided in a way that sensitises the students to the needs of patients and their relatives and inculcates that caring approach to clinical practice that is essential if both patients and health practitioners are to benefit from the encounter.

It is expected that clinical clerks will display in their attitudes, mode of attire, behaviour in a public setting, and interrelationship with the patients and all categories of staff on the firms to which they are assigned, the highest standards of deportment and medical ethics. Such an approach to their responsibilities in the provision of medical care will ensure that the students will derive the maximum benefit from this period of clinical tutelage.

OBJECTIVES OF THE CLINICAL CLERKSHIPS

The Clinical Skills course followed during Phase I of the undergraduate programme is a prerequisite for a smooth and effective transition to clinical clerkship activity. In Phase II, the courses aim to consolidate the basic concepts of history taking and presentation, together with the development of the necessary skills in eliciting and interpreting abnormal physical signs in the various organ systems.

Students will be expected to develop proficiency in the techniques of physical examination of the major organ system and to differentiate normal from abnormal physical signs and their interpretation.

Holidays

During the fourth (4th) year, students will be entitled to two (2) weeks Vacation Leave. Such leave, however, will be taken at the discretion of the Tutor or Consultant to whom they are assigned.

COURSES DESCRIPTIONS

In the fourth (4th) year, the course consists of eight (8) week clerkships in the following disciplines: Medicine, Surgery, Paediatrics, Obstetrics & Gynaecology, Psychiatry and Public Health.

In the fifth (5th) and final year of the programme, there are additional clerkships in Primary Care Orthopaedics, Otolaryngology, Ophthalmology and Anaesthetics, and Intensive Care.

CLINICAL MEDICINE - MD300 [MEDC4320], [MEDC5320]

The core cases to be covered during the clerkship in Medicine include those from the following areas:-

- Cardiovascular Disease
- Gastroenterology
- Neurology
- Respiratory Diseases
- Genito-Urinary Diseases
- Endocrine and Metabolic Diseases
- Haematology and Immunology
- Musculo-Skeletal System/Rheumatology
- Aging
- Diseases of the Aged/Aging
- Infectious Diseases/HIV

Many of the diseases and disorders taught in Medicine will be repeated, albeit with a different emphasis when they move to another discipline such as Surgery, Paediatrics and Obstetrics, and Gynaecology etc.

Students will receive a Case-book in which they will record their experiences to serve as a portfolio for years 4 and 5.

THE COURSE CONTENT

Aims and Objectives

At the end, Clerkship students are expected:

1. To demonstrate competence in the initial management of medical emergencies, especially as a first responder;
2. To engage in effective medical problem-solving and clinical diagnosis.
3. To assess the health status of individuals and groups through observation and data collection by way of history taking, physical examination and judicious use of laboratory investigations.
4. To perform standard clinical procedures.
5. To prepare to implement a rational management plan including appropriate referral.

6. To involve the patient and family in the plan for care and to educate the patient and family.
7. To have a rational approach to therapeutics evidence based as far as possible.
8. To recognize the role of nutrition and physical activity in maintaining wellness, prescribing diet therapies and lifestyle modifications where they are relevant.
9. To understand the importance of disease (physical, emotional and financial) upon the individual and family.
10. To practise medicine within the ambit of professional medical ethics and the law.
11. To be accountable for professional and personal actions in the care of patients.
12. To evaluate the results of treatment and to follow up with appropriate feedback.
13. To function harmoniously and constructively as a member of the multidisciplinary team within the health sector and between the health sector and other sectors of the society.
14. To investigate and treat the individual with a consciousness of the cost of such interventions.

Pathophysiology

It is imperative that students maintain an intimate and continuous association with the Departments of Pathology and Microbiology, as it will become increasingly clear that a comprehensive knowledge of the patho-physiology of disease is the basis of all clinical diagnosis and treatment of disease. It is impossible to master the understanding of disease without a sound knowledge of Pathology.

Assessment

FOURTH YEAR

1. Students will be assessed on a continuous basis on the following criteria:
 - Attendance
 - Professional Attitude and Department
 - Clinical /Technical Skills
 - Factual Knowledge
 - Initiative and Involvement

- Empathy
(See attached end of Clerkship Assessment form)

2. At the end of the clerkship, students will be assessed by
 - a. computer-based clinical examination
 - b. a written examination
3. During the fourth year, 2 OSCE's will be conducted – one circa September and the other circa March – half of the fourth year class at each turn.
4. Students are expected to keep a Portfolio of ward and clinic experiences. These will be reviewed periodically to ascertain quality of the clinical experience.
5. From the Class of 2006 onwards, continuous assessment will contribute 20% towards the final examination.

FIFTH YEAR

As per the fourth year

EXCEPT:

A mock OSCE will be held circa one month prior to the final MB BS Examinations in May-June and November-December.

PASS/FAIL FOR CLERKSHIP:

Grades A, B, C secure a pass. Students with lower grades may be required either to conduct remedial work or repeat the clerkship.

FINAL EXAMINATION:

The final examination comprises a written component and a clinical component. There are two written papers: Paper I is a three-hour multiple true/false paper and Paper II is a three-hour essay paper. A grade of 50% is a pass for this component.

The clinical component takes the format of an objective, structured clinical examination that comprises stations in Adult Medicine, Child Health, Psychiatry and Community Health – usually a combined total of twenty-one to twenty-five each of seven minutes duration. The candidate must obtain a pass in this component in order to pass the examination in Medicine and Therapeutics. Borderline candidates and Honours/Distinction candidates will be further tested in a multidisciplinary ORAL examination.

* See item 5 above re: continuous assessment.

Full details of curriculum, clerkship timetables and detailed regulations governing examinations are available from the Departmental Secretary at Extension 2926.

MD301 [MEDC4321], [MEDC5321] CHILD HEALTH

The overall objectives of the child health programme are to equip the student to recognise a normal child from birth to adolescence, obtain a complete medical history, perform a physical examination, arrive at a rational, informed diagnosis, acquire certain technical skills, become familiar with certain procedures, understand the social and familial environment of childhood problems, and develop a professional and caring attitude.

The Curriculum

The curriculum comprises the following:

- A. **An Eight-week Clerkship, Year 1.** This includes bedside teaching, tutorials, seminars, case presentations, attendance on emergency service and outpatient clinics (see Annex 1 for details). The main components of the clerkship are:
1. An introduction to child health including history taking and complete physical examination in which differences peculiar to Paediatrics are highlighted.
 2. Rotations through various services at the Children's Hospital, EWMSC, Neonatal Unit, Mount Hope Women's Hospital, the Community Paediatric Clinics and Radiology.
- B. **A Six-week Clerkship, Year 2.** This is designed to strengthen clinical skills and further develop basic paediatric knowledge.

At the end of the clerkships, the student must be able to:

1. take a complete history from the parent or guardian with special emphasis on those aspects of more relevance to the paediatric age group, e.g. antenatal, natal and post-natal histories, nutritional and dietary history, developmental, immunisation, social and family history;
2. perform a physical examination on a child and gestational assessment in the newborn;

3. estimate the age of any child based on physical, developmental and behavioural features;
4. identify, based on history and examination, all the problems in the physical, social, behavioural and intellectual functioning of the child and produce a scheme of management intended to solve them;
5. assess the nutritional status of the paediatric patient and understand the use of growth charts;
6. demonstrate a knowledge of the pathophysiology and management of common childhood diseases, including common emergencies and preventive paediatrics;
7. relate the problems of the patient to his environment and discuss the various resources in hospital, home and community that may be used to solve them;
8. Communicate effectively with the patient and family, and understand medical ethics.

Technical Skills

The student should be able to:

1. Perform venepuncture: antecubital, external jugular and femoral veins
2. Perform heel prick
3. Start an intravenous infusion using scalp or peripheral vein
4. Obtain throat and blood cultures
5. Insert a nasogastric tube
6. Feed a baby by bottle, cup and spoon
7. Perform bag & mask ventilation and external cardiac massage
8. Perform and interpret urinalysis & microscopy, dextrostix, haematocrit and bilirubin estimations, blood gas analysis and transillumination of skull & chest
9. Witness and describe the following procedures:
 - *saphenous vein cutdown*
 - *umbilical vein catherisation*
 - *exchange transfusion*
 - *resuscitation of the newborn*
 - *suprapubic aspiration*
 - *lumbar puncture*
 - *thoracocentesis*
 - *subdural tap*
 - *Denver development screening test*

The student should be able to do the following:

1. Give advice to parents on infant and child feeding and nutrition, having regard to their social and economic circumstances.
2. Design a childhood immunisation programme.

The student should demonstrate an understanding of the concept of the health team and recognise his/her limitations in dealing with a problem and recognise when to seek help. The student should understand and respect the rights of the patient and discharge his duties in an ethical and caring manner.

Student Assessment

Students will be assessed in the following manner:

1. Attendance and reliability	10
2. Factual knowledge	10
3. Approach to clinical problems	10
4. Department	10
5. OSCE	25
6. Case presentation	10
7. MCQ/Essay	25
Total	100

Grading:

A =	75%	=	Excellent
B =	65%-74%	=	Good
C =	55%-64%	=	Fair
D =	50%-54%	=	Poor
E =	Up to 50%	=	Very Poor
F =	Fail	=	< 50

MD302 [MEDC4322], [MEDC5322] COMMUNITY HEALTH

Fourth (4th) Year Clerkship Rotation

The Fourth (4th) year Community Health Clerkship is concerned with the practical study of the health care delivery system and social services of Trinidad & Tobago. Students will be exposed to the approach and methodology of problem-oriented operational research.

In the fifth (5th) year, clerkship students will apply practically all that they have learnt about the family, community care, rehabilitation of patients and the role of the practicing physician in family and community health care and promotion.

Students will be expected to study, analyse and present scientific papers and reports of a publishable standard for medical journals, thus preparing them for a continuous professional education.

In the Fourth (4th) year, Community Health Clerkship Rotation students will learn about the health care delivery system of Trinidad & Tobago and the health protection and health promotion activities, based in the community. Applying the knowledge acquired in the Community Health subjects during the pre-clinical course, they are expected to study in a practical way, and to understand and analyse health structures, systems and their functions. The interactions and interrelations of health related activities would be studied in the context of the concept of Primary Health Care in relation to the particular environment of the Caribbean region. Students will observe the ways in which health care organisation impacts on access and utilisation and influence the perception of patients and their attitudes to the health services.

The clerkship is intended to encourage the students to function as a team. It intends as well to develop their ability to collect relevant information through observation and practical participation in health activities, in the health services, and community. It is also expected that during the Clerkship, students will develop the ability to analyse and critically assess this information and present it in the form of written reports or orally at seminars for group discussion.

The students, who should by now be skilled and motivated in self-directed learning, will actively participate in the definition, planning and organisation of the Clerkship. This will enable them to take a larger responsibility for the educational process and enhance their ability for self-organisation of the learning activities.

General Objectives

The Clerkship should enable the medical students to:

1. study and understand the health policy of Trinidad & Tobago, as well as the structure, organisation and function of the health care delivery system, including drug supply/ utilisation and cost effectiveness of chronic disease management, and also the special welfare services of the country, as they relate to health;
2. become aware of the role of medical, health and social workers, as members of a health team, in the delivery of health care, prevention of diseases and health promotion of the individual, and community;
3. study the activities related to disease prevention, control and health promotion as carried out by the health services and the community in the context of the primary health care strategy and observe the ways in which health care organisation impacts on access and utilisation;
4. study the organisation and delivery of environmental and occupational health services and appreciate the relevance of these activities in the prevention and control of disease and health promotion;
5. obtain relevant information through active participation in health care activities, through observation and through discussions with resource persons, and after critical analysis of such information, to present it orally for group discussion or in written reports;
6. develop the attitudes of teamwork and the ability to undertake responsibility as a team member;

Organisation of a Clerkship

The Clerkship is structured in three blocks:

1. Block One (3 weeks) - study of health care delivery system in Trinidad & Tobago the organisation, structure and function of basic health services, including the recording, reporting and referral system, and its relation to social welfare services, family and community, and its influence on patient access and utilisation. The learning activities will be focused on the role and function of health centres, the health team, maternal and child health, chronic disease and family planning clinics, school health and home visits.
2. Block Two (2 weeks) - study of structure, organisation and function of prevention, control and surveillance of disease, and the monitoring of health. The learning activities will be centred on the function of the system of disease surveillance, health education and specific programmes related to sexually transmitted diseases with emphasis on AIDS, and re-emerging diseases e. g. tuberculosis.
3. Block Three (3 weeks) - study of structure, organisation and function of environmental and occupational health services.

Learning activities will focus on specific areas within the existing system such as general environmental health, occupational and industrial health, vector control, public health engineering, monitoring of food and drugs, and disaster preparedness.

Educational Approach

The clerkship is based on the educational principles of self-directed learning and self-organisation of learning activities, including classical PBL tutorials and seminar discussions.

Student Involvement and Responsibility

Students are expected to actively participate in the definition, development and the organisation of the clerkship so that the clerkship evolves towards the students' perception of what they should learn, know, understand and be able to perform, to achieve their own objectives, the educational objectives of the Community Health programme and the broad objectives of the Clerkship. Therefore:

- a. the students define the objectives of the clerkship and the individual blocks at the beginning of the clerkship and discuss the organisation and the timetable for learning activities;
- b. at the end of the clerkship, the students discuss and analyse the programme and its organisation and timetable. They evaluate their own performance as a team and as individual members of the team, and the achievement of the objectives that they have set up. The students assess the assistance received from the staff and make recommendations for the future clerkship groups;
- c. the students are involved in the preparation of the programme for the next group, thus assuring a continuous student input in the development of the clerkship programme.

Problem Based Learning

The major learning topics will be introduced through PBL tutorials. The methodology of the tutorials follows the established pattern, but with some modifications accommodating the requirements of a practical self-directed and self-organised learning programme.

Structure of the PBL Tutorials

STAGE I

- discuss the presented problem;
- formulate the learning objectives;
- identify priorities of the objectives;
- define the learning activities;
- plan the work timetable.

STAGE II

- work on the issues and collect the information through observation and/or participation in activities, through interviews with the health staff and patients and through study of documents and references;

- analyse and summarise, both individually and collectively, the acquired information and findings.

STAGE III

- present and discuss the problem;
- summarise what has been learnt;
- evaluate achievement of the learning objectives;
- identify problems related to the students' work;
- assess support received;
- assess the PBL problem formulation;
- make recommendations for the clerkship.

Places of Work and Sub-grouping of Students

The Clerkship work will be carried out at health centres, maternal and child health, family planning clinics and various departments of central Ministry of Health and their sub-units, as well as private/nongovernmental organisations. Students will be expected to undertake visits to the community, to families and to schools, and to work with environmental health personnel and acquire knowledge of the role and functions of the National Surveillance Unit.

For particular studies or activities, the students will form sub-groups of 2 to 3 students.

Seminars

Groups of 2 to 3 students will be assigned to prepare and present, for seminar discussion, a topic related either to the health care delivery system of Trinidad & Tobago, or an important health problem in the Caribbean. The students are encouraged to select a topic of their own choice. A member of staff of Community Health, Ministry of Health or CAREC will serve as a resource person. However, all students of the group are expected to prepare for the seminar and take an active part in the discussions.

Written reports

As the Clerkship is based on self-directed and self-organised learning, it is a requirement that the individual students each prepare and submit a written report on their activities, on the collected information, and on the analysis made. Such a report should include recommendations related to particular components of the blocks.

End of Clerkship Examination

The examination will cover all activities of the clerkship, practical as well as theoretical, of the various blocks.

Assessment of the students

The students' performance will be evaluated on the basis of continuous assessment of their work during the clerkship in relation to the major learning objectives and activities of the clerkships and a final examination. It will include:

- a. knowledge as shown in the PBL tutorial and seminar discussions;
- b. aptitude in application of concepts in practice as expressed in the reports, PBL and seminar discussions;
- c. ability to collect, analyse and present relevant information in verbal and written report form (reports, seminar presentations);
- d. attitude to work, self-discipline and team spirit, (attendance, timely presentation of reports, group reports);
- e. end of clerkship examination.

The final assessment mark will be cumulative of the following:

- | | |
|--|-----|
| 1. The average of the reports | 20% |
| 2. Seminar presentation | 20% |
| 3. Contribution and participation in the PBL and Seminar discussions | 20% |
| 4. End of clerkship examination | 20% |
| 5. Attitude to work and diligence | 20% |

Where appropriate, the students will be asked to assess the seminar presenters and the group performance, drawing conclusions and making recommendations for improvement.

Evaluation of the Clerkship Programme

At the end of the Clerkship the students will evaluate all aspects of the Clerkship in accordance with a questionnaire prepared by the Department of Medical Sciences Education, and their views and recommendations will be discussed with the Community Health; Department Staff, which will be taken into account in the continuous review of the clerkship programme.

MD303

PSYCHIATRY

The Psychiatry undergraduate clerkship is geared toward providing the student with a general understanding of psychiatry as it relates to medical practice as a whole; it hopes to encourage some students to choose psychiatry as a specialty. For the majority who do not, it seeks to sensitise them to the relevance of psychiatric problems in their practice.

Aims:

The Unit of Psychiatry aims to make the medical student sufficiently familiar with the psychological aspects of medicine so that (s)he would be a safe and competent doctor regardless of the specific field in which (s)he may eventually settle.

Desired Attitudes:

A balanced approach to the practice of medicine requires awareness in the doctor that although patients usually present a physical complaint, their physical symptoms often carry some emotional disturbance. Furthermore, some conditions (e.g. conversion hysteria) may have a psychological rather than an organic basis and the doctor should be able to recognise when this is the case.

- a. The student also needs to keep in mind that all classes of physical illness (e.g., infections, neoplasms, adverse effect of drugs prescribed) may include psychiatric features and often present as purely psychiatric syndromes.
- b. The student should be aware that certain forms of behaviour, which appear to be character traits or to be within normal limits and may even, be socially accepted, may in fact be pathological and lie within the realm of psychological disturbance (e.g. heavy drinking, suspiciousness, and irritability).

Objectives of the Psychiatry Clerkship

The clerkship in psychiatry is intended to equip the student with the knowledge and skills in psychiatry that are essential for him or her to practice effectively as a medical practitioner. By the end of the clerkship the student should be able to recognise the biological, psychological and socio-cultural determinants of psychiatric illness, be able to diagnose the common psychiatric disorders and be conversant with the principles of management and the techniques of treatment in psychiatry.

In order to achieve these goals and to establish a basis for assessment, the “objectives” of the clerkship are formulated as follows:

The student should be able to:

1. Conduct a psychiatric interview and establish a therapeutic alliance with the patient.
2. a. Understand the way human growth and development impacts on illness and psychopathology. Explain the relevance of details of the patient’s life history, including birth and early life, school record, pre-morbid personality and intelligence, cultural background and sexual adjustment.
2. b. Use this information to be able to present a formulation of a patient’s illness, which takes into account the part played by:
 - Biological factors
 - Psychological factors
 - Socio-economic and cultural factors
3. Understand the commonly used terms that are relevant to psychiatry so that one can conduct a mental status examination and describe its findings in the language of psychiatry.
4. Recognise and manage emotional and psychiatric issues that may affect patients seen in any medical setting. This includes working understanding of stress and the way it impacts on disease states.
5. Identify abnormal psychological states, which have a known neurological, biological or other organic basis.
6. a. Describe the main features of:
 - The major psychoses (schizophrenia, affective disorder)
 - The anxiety disorders
 - Alcoholism and substance abuse
 - Organic brain disorders e.g. dementia, delirium, and HIV related problems
 - Personality disorders
 - The more common childhood and adolescent disorders

- b. Identify them in a given subject.
7. Define the principles of psychotherapy as might be used in cognitive/behavioural, interpersonal, and psychodynamic interventions and describe the relevant techniques.
8. To describe the meaning and use of:
 - Group therapy
 - Behaviour therapy
 - Family therapy
 - Therapeutic community
 - Crisis intervention
9. Foster an understanding of the function of the multi-disciplinary team in Psychiatry. To describe the part played in the management of the patient by:
 - The nurse
 - The occupational therapist
 - The mental health officer
 - The psychologist
 - The psychiatric social worker
10. a. Be familiar with the pharmacology of the drugs commonly used in psychiatric practice.
- b. State indications, dosage and cost of preparation, side effects, toxic effects and duration of treatment.
11. Describe the principles and technique of other forms of physical treatment e.g. ECT.

The psychiatric clerkship lasts for eight weeks. All students spend the first week in the Psychiatry Unit, Eric Williams Medical Sciences Complex receiving an introduction to psychiatry and psychology.

From the second week on, students are divided into two groups and are assigned to psychiatric wards at the San Fernando General Hospital and at St Ann’s Hospital, as well as at community clinics. Each group is assigned to each institution for three weeks. Clinical teaching is conducted on mornings by lecturers or associate lecturers on ward rounds and outpatients’ clinics.

The final week consists of clerkship assessment. This includes a multiple true-false paper, essay and mini-OSCE examinations.

Students are expected to examine patients on the wards and in the clinics, and to present those cases when asked. Students are expected to prepare clinical case notes, in which case histories and mental status examinations, investigations, differential diagnoses, treatment plans, and follow up notes are maintained for at least three patients suffering from different psychiatric disorders. Task cards with specific activities must be completed and signed by a supervising lecturer.

Tutorials are conducted three times weekly and follow the Problem Based Learning (PBL) format and student presentations. Lectures in Psychology are conducted weekly.

CLINICAL SURGICAL SCIENCES

Aims of the undergraduate programme in the Clinical Surgical Sciences:

1. To prepare students for the practice of whichever branch of medicine they may subsequently enter by providing them with training in those essentials of care that every physician should provide.
2. In collaboration with other departments, to ensure that students adopt logical and scientific methods of history-taking and physical examination and apply these to the understanding of the natural history and treatment of disease.
3. To teach concepts of normal body processes and the principles of tissue response to disease and injury, building on the understanding which students have acquired during training in the Basic Health Sciences programme.
4. By providing exposure to as wide a variety of disease conditions as possible, to underline from the beginning of the clinical training programmes, the importance of basic clinical acumen in the proper care of patients, stressing a critical attitude towards the use of investigative facilities.
5. To emphasise the application of principles previously learnt to the details of patient care, especially in the emergency room, the outpatient department and the acute surgical wards.
6. To encourage the continued application of self-directed study to the process of life-long learning, during a period of increasing participation in the responsibilities of patient care.
7. To enhance the doctor-patient relationship, through example and teaching, by fostering an attitude of concern for all patients with whom contact is made

and for whom some responsibility is assumed, through honest and effective communication about the disease(s) affecting them and the choice of treatment options.

8. To teach the importance of formulating and applying a management plan to patient care, particularly in less acute cases.
9. To insist that trainees are completely familiar with and motivated to apply strict ethical principles to the practice of medicine.

COURSE STRUCTURE

The following courses will be covered during the clinical rotations in the Department:

MD330	Obstetrics and Gynaecology
MD340	General Surgery, Neurosurgery and Paediatric Surgery
MD341	Orthopaedic Surgery and Accident & Emergency Medicine
MD342	Otorhinolaryngology
MD343	Ophthalmology
MD344	Anaesthesia and Intensive Care

THE JUNIOR SURGICAL CLERKSHIP (YEAR 4)

During this period the student will be expected to develop a strong foundation in General Surgery. A progression of topics is introduced during the eight weeks, which are divided into two blocks of four weeks each at the Port-of-Spain and San Fernando General hospitals. Students will be assigned in groups, to specific firms. They will begin to assume limited clinical responsibility for the care of patients.

The first block introduces the following subjects:

- Pre-operative preparation; operative etiquette; post-operative care
- Fluid and electrolyte balance
- Body surface lesions
- Wound care; principles of wound healing
- Abdominal wall and groin hernias
- Surgical infections

During the second block, the student is introduced to:

- The acute abdomen—diagnosis and management
- Surgical pathology of malignant lesions; diagnosis and management

Seminars will be conducted on common urological problems on a weekly basis. Topics will include haematuria, renal calculi and urinary retention.

During the junior rotation, weekly sessions on Accident and Emergency Medicine will also be conducted. Tutorials will include problem-based learning sessions and clinical skills training on:

- Trauma resuscitation
- Management of the head injured
- Early management of burns
- Abdominal trauma
- Shock; haemorrhage and transfusion
- Basic life support; basic airway management; basic cardiac resuscitation

During both clinical years, the student will be required to keep a surgical case book of the cases in whose management (s)he has participated. (S)he will also need to get documentation of a series of procedures listed in the log book. The individual entries will have to be signed off by the tutor(s). An end of clerkship assessment is done by written and/or oral examination.

THE SENIOR CLERKSHIP ROTATION YEAR 5

The final year includes a number of rotations in disciplines encountered in the junior year as well as exposure to the major sub-specialties. The new rotations include Anaesthetics and Intensive Care, Orthopaedics, Ophthalmology, Otorhinolaryngology and Paediatric Surgery.

In addition, attendance at clinico-pathological presentations and conferences is meant to facilitate a deeper, more comprehensive understanding of the relationship of pathological processes to the symptoms and signs of disease states.

The fifth (5th) year programme is intended to:

1. Consolidate and refine the objectives outlined in Year four (4) of problem-solving in a clinical setting.

2. Create a deeper understanding of the patho-physiology of disease and facilitate a comprehensive knowledge of Pathology/Microbiology, Immunology and their relationship to symptoms and physical signs, in continuation of the process begun in Year 4.
3. Promote an understanding of the epidemiology and pathogenesis of disease processes, and how these may interact with the patient, his/her relatives and the community.
4. Foster the acquisition of the skills necessary for predicting, recognising and hopefully preventing the progression of a disease process and its complications.
5. Develop a more comprehensive insight into the relevance of investigations of disease processes, and the use of possibly predicting the outcome of a disease process. It is imperative that students become fully aware of the value and limitations of clinical and laboratory investigations in obtaining an overview and understanding of a disease process and its final outcome.
6. Induce knowledge of the pharmacological basis for the treatment and management of disease. Students will be taught the therapeutic interventions considered necessary in the treatment of disease. Students will also be expected to acquire a working knowledge of the essential drugs used in the management of the major disease processes and the therapeutic models of intervention. They will be expected to know and understand such concepts as absorption - bioavailability, distribution, selective uptake and methods of degradation and routes of elimination of drugs and their metabolites etc.
7. Emphasise an awareness of the interdependence of the various disciplines in Clinical Medicine on each other, and their close relationships. Students should be able to recognise that the development of divisions such as Medicine, Surgery etc., is purely arbitrary and hence, must learn early to recognise the interdependence of disciplines (departments) on each other in achieving optimum management of the patient as a whole person.

8. Enable the student to recognise and understand the impact of the disease on the patient physically, psychologically and economically, and to be able to advise the patient and his/her relatives about the prognosis and final outcome of a particular disease process and how it may modify the patient's ability to function both now and in the future.

Assessment

End of clerkship assessments will follow a format similar to that indicated for the fourth (4th) year.

MD330 [MEDC4330], [MEDC5330]

Obstetrics & Gynaecology

The chief aims of this initial period of training in human reproduction and family planning are:

- To allow students to establish an effective relationship with patients in order to gather data from them and,
- To develop their clinical skills to an extent over-riding reliance on elaborate biochemical and biophysical investigations.

These aims are accomplished by:

1. Teaching the evaluation of a clinical condition from the history and physical findings
2. Employing case presentation as the preferred method of teaching
3. Bedside discussions/tutorials and clinical teaching sessions, and
4. Clerkship rotations through the labour, antenatal and gynaecological wards, in order to gain effective communication and rapport with women in physical or mental stress.

In Obstetrics, the physiology of normal pregnancy, antenatal care and basic nutritional requirements, the management of the normal puerperium and lactation are given priority. The mechanism of normal parturition is taught with emphasis on pain relief and the use of pharmacological agents in retarding or accelerating labour. Students are allowed to gain practical experience by performing a number of deliveries and are given the opportunity to develop manual skills, e.g. by suturing episiotomies and assisting at operative deliveries. They are also introduced to obstetric problems that are common in the Caribbean, such as the hypertensive disorders of pregnancy, diabetes, anaemia, etc.

In Gynaecology, much attention is focused on the science and techniques of conception control and the importance of these entities in a comprehensive maternal and child care programme. The key role of screening programmes in controlling cervical cancer and the problems of early pregnancy are highlighted.

Course Outline

A. Obstetrics:

1. Antenatal management:

Antenatal Care, prenatal diagnosis
Hyperemesis gravidarum
Anaemia, Sickle Cell Disease
The Hypertensive Disorders
Diabetes
Antepartum Haemorrhage

2. Delivery:

Normal Labour
Dysfunctional labour
Relief of Pain
Episiotomy
Foetal Distress

3. The Puerperium:

Lactation
Postpartum Haemorrhage

4. Caesarean Section, Forceps Delivery

B. Gynaecology

Physiology of menstruation
Contraception and Sterilisation
Abortion/Miscarriage
Infertility
Pelvic Pain
Excessive or irregular blood loss
The Pap Smear, Cervical Cancer
Vaginal Discharge

A course outline is given to junior students at the beginning of the clerkship so that each student can study the topics for the end-of-clerkship examination. It also presents a guide to the teachers but is by no means a rigid curriculum, and teachers are advised to maintain a degree of flexibility. Didactic teaching is not always possible on all the subjects in the course curriculum, and clinical exposure and self-learning activity are relied upon to fill the gaps.

The clerkship in the first clinical year consists of eight (8) weeks spent at the General Hospital, Port-of-Spain and the second Year includes a six (6) week clerkship at the Mount Hope Women's Hospital.

During the Obstetrics & Gynaecology Clerkship, persons in statu pupillari:

1. Are on duty until 10:00 p.m. on weekdays when their unit is receiving; and on Saturdays and Sundays, until 6:00 p.m.
2. Are expected to perform normal deliveries and to participate in at least 5 operations, during the junior and senior years. Each delivery must be certified by the doctor or midwife in charge.
3. Are expected to suture vaginal lacerations and episiotomies. This provides an excellent opportunity for studying the anatomy of the region and for developing one's surgical skill.
4. Must wear proper dress while attending to patients and wear a name badge at all times. Proper decorum is mandatory.

Students will not participate in teaching rounds if appearing untidy and unkempt.

5. Must on no account leave the precincts of the hospital when on duty, without the permission of the Registrar or Consultant. Labour Ward duty takes priority over everything else in the Department. The lecture theatre and library may be used while awaiting deliveries.
6. Must be punctual. No student will be allowed to join teaching sessions if he is late, without good reason.
7. Are attached to Units and must on all counts adhere to the attachment scheme. Failure to adhere to this scheme will result in poor assessment grades.
8. Are required to read the manuals, available in the department during the first week of the clerkship.

Assessment

Students are evaluated chiefly on their application to work on the wards. Written course-work is assigned twice during the clerkship, corrected with criticisms, and the achievement data are fed back to the students. This technique is used simply as a device to support learning. A terminal assessment is performed by written and/or clinical examination.

MD340 [MEDC4340], [MEDC5340] GENERAL SURGERY

The general surgery rotations comprise an eight-week clerkship in each year. The clerkships take place at the Port-of-Spain and San Fernando General Hospitals and at the Eric Williams Medical Sciences Complex. Students are assigned to individual firms for participation in ward rounds, operating theatre sessions, outpatient clinics and emergency duty.

Objectives

At the end of the clerkship in General Surgery the student will be able to:

1. Take a competent history.
2. Correctly interpret symptoms and physical signs and make confident clinical decisions.
3. Explain how surgical disorders evolve and the various stages at which physical examination, laboratory investigation and special procedures may lead to the establishment of an accurate diagnosis.
4. Identify those surgically remediable conditions that commonly afflict members of the community.
5. Choose between different therapeutic manoeuvres, according to time and circumstance, and, in particular, recognise life-threatening surgical emergencies and initiate management.
6. Based on (5) above, formulate and carry out a management plan as appropriate.
7. Appreciate the importance of patient education on the nature of their disease, the prognosis and the treatment options available.

8. Demonstrate the acquisition of skills in minor surgical procedures such as wound suturing, urethral catheterisation and drainage of superficial abscesses, and describe the basic principles of operative surgery and the various factors that may influence a choice of procedure.
3. assess the level of consciousness of a brain damaged patient and assign a Glasgow Coma Scale Score;
4. be proficient in carrying out an examination of the nervous system and eliciting and interpreting any abnormal physical signs;

Students will be expected to keep a 'case book' record of the patients in whose care they are involved and to ensure that the list of procedures, which they are required to perform or observe, is completed.

A number of topics will be presented in a lecture format on an annual basis. These lectures are given on Saturday mornings in an Amphitheatre at the Eric Williams Medical Sciences Complex. Attendance is possible for students in both clinical years. A detailed programme will be posted.

Assessment

An in-training evaluation will be submitted by each tutor at the end of each rotation for each student. A clerkship assessment will take place at the end of the rotation. This may involve an MCQ, an Objective Structured Clinical Examination (OSCE) and/or an oral examination. This assessment may be used in determining the student's eligibility to write the final examination and to achieve a passing grade. A student whose evaluation is unsatisfactory may be required to undergo a course of remedial training.

NEUROSURGERY

Course Description

The teaching in this specialty begins in the junior clinical year and continues in the final year. The student is exposed to bedside teaching, small group tutorials and formal lectures in Neurological Surgery.

Objectives

At the end of the Surgical Clerkship, it is expected that students will be able to:

1. take a history of the presenting relevant complaint quickly;
2. assess the mental state of a patient;
3. conduct assessments of visual and auditory functions;
4. determine, on the basis of the history and physical examination, the level in the nervous system which is impaired, and the likely pathology;
5. indicate what further (cost effective) investigative measures are required;
6. detect obvious abnormalities of the neuraxis on plain radiographs and more specialised radiological studies ;
7. formulate and maintain a management plan for an individual case both in an emergency and in the stabilised state;
8. describe the principles of management of subluxated or displaced spinal fractures complicated by compression of the spinal cord;
9. initiate non-operative prophylactic measures against possible complications of primary and secondary CNS trauma;
10. describe the triad of clinical features associated with increased intracranial pressure;
11. appraise the risks of lumbar puncture in patients with raised intra-cranial pressure;
12. describe concepts of space usurping intracranial mass lesions, their associated pathophysiology and principles of treatment;
13. describe the common types of congenital defects of the neuraxis and the principles of management of such conditions; and
14. describe the potential value of electro-physiological tests e.g. E.E.G and nerve conduction studies.

Assessment

The student will receive ongoing assessment based on performances during the tutorials. Some questions on the specialty will be included in the end of clerkship examination.

PAEDIATRIC SURGERY

Course Description

This course is introduced during the final year clerkships. The student is expected to attend weekly outpatient clinical sessions at the Medical Sciences Complex and take part in case presentations and discussions. Attendance at weekly grand rounds on the surgical wards is encouraged. An overview of the specialty is included in the annual lecture series.

The aim of this course is to build on the knowledge of general surgery and paediatrics acquired during the fourth year rotation. The student is helped to understand the pathophysiology, diagnosis and principles of management of common and important surgical conditions that occur in infants and older children. Several areas of overlap exist within the programmes in paediatric medicine, general surgery and some of the other surgical sub-specialties.

At the end of the clerkship, the student will be expected to be able to identify, describe and discuss the pathophysiology and management of common paediatric surgical conditions such as:

- Masses, cysts and fistulae of the head and neck
- Benign body surface tumours
- Hernias, hydrocoeles and undescended testes
- The acute scrotum
- Non-acute and acute abdominal pain
- Congenital abnormalities of the genito-urinary system.

In addition, the student will be expected to demonstrate a detailed knowledge of the following topics peculiar to the specialty:

- Neonatal surgical conditions
- Congenital pyloric stenosis
- Meckel's diverticulum
- Intussusception
- Hirschsprung's disease
- Solid tumours of infancy and later childhood

Assessment

A clerkship assessment will be incorporated in the end of clerkship assessment in general surgery during the fifth year. This will include some questions in the MCQ, OSCE, essays and oral assessments.

MD341 [MEDC4320], [MEDC5320] ORTHOPAEDIC SURGERY (4 weeks)

During this clerkship, students are involved in the management of patients assigned to them. Clinical exposure will be obtained through attendance at ward rounds, outpatient clinics, operating-room sessions and emergency duty assignments, as rostered.

Rotations take place during the final clinical year at the Port-of-Spain General hospital. Some teaching is done at the San Fernando General hospital and is soon to resume at the Medical Sciences Complex.

Objectives

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

1. Demonstrate a systematic approach to history taking and the clinical examination of the musculo-skeletal system and derive a clinical diagnosis based on this;
2. Relate the disease process to the functional impairment induced so that an appreciation can be had of the extent to which traumatic and non-traumatic afflictions of the locomotor system can affect the ability of a patient to perform normal work-related and recreational physical activity;
3. Identify patients with common orthopaedic and traumatologic complaints, relate their clinical features to the underlying pathology and establish a rational protocol for management;
4. Appraise the devastating effects on normal physical and psycho-social development which may ensue as a result of congenital lesions of the musculo-skeletal system and the modalities available to manage their sequelae, e.g. physiotherapy and rehabilitative procedures.

Formal tutorial sessions will cover topics such as: -

- Fractures, sprains and dislocations in childhood and adult life including classifications and management;

- Congenital anomalies and disorders of normal growth, including kyphoscoliosis;
- The arthropathies and haemoglobinopathies;
- Metabolic and endocrinological diseases of bone;
- Postural problems and low back pain;
- Tumours of the skeletal system;
- General principles of sports medicine, including training methods and prevention and management of injuries in athletes.

A programme in Accident & Emergency Medicine is being developed to familiarise students with the principles of trauma evaluation and care and give a grounding in basic life support procedures .

Assessment

Continuous evaluation takes place during the clerkship, and an end of clerkship evaluation, which may include a research project, is carried out.

MD342 [MEDC5342] OTORHINOLARYNGOLOGY (E.N.T. SURGERY)

The aim of this rotation is to familiarise the student with **common** disorders of the Ear, Nose and Throat. Students will be assigned to the operating theatre and the out-patient clinic to observe details of management of common conditions that occur in the specialty. They will be rostered on call to assist in the management of E.N.T. emergencies. This is a six (6) week programme concurrent with ophthalmology.

Objectives

At the end of the rotation, the student should be able to perform a thorough E.N.T. examination and be able to diagnose and manage common E.N.T. diseases. Students will be able to:

1. Take a complete history including details of specific E.N.T. complaints e.g. otorrhoea, otalgia, rhinorrhoea, hoarseness etc.;
2. Do a thorough otological examination, with the proper use of the otoscope and tuning fork;

3. Examine the nose externally as well as perform anterior rhinoscopy;
4. Examine the oral cavity, pharynx, larynx, salivary glands and neck.

Students will also be exposed to indirect laryngoscopy and posterior rhinoscopy.

Tutorials and clinical teaching will be directed towards the following areas:

1. **OTOLOGY**
 - a. Hearing Loss
 - Diagnosis and management of common causes, including the use of audiometry and interpretations of audiograms.
 - Identification of infants at high risk of hearing deficit and their evaluation.
 - b. Causes of otalgia, otorrhoea, tinnitus and vertigo and their management.
2. **RHINOLOGY**
 - a. Causes and management of epistaxis, nasal obstruction and rhinorrhoea.
 - b. The use of the endoscope in the diagnosis and management of nasal and para-nasal sinus disease.
3. **HEAD AND NECK SURGERY**

Causes and management of a 'sore throat', hoarseness, dysphagia and upper airway obstruction.

Assessment

A Clerkship assessment will take place at the end of the rotation. This will consist of an MCQ and/or an Objective Structured Clinical Examination (OSCE).

MD343 OPHTHALMOLOGY

Course Description

The purpose of this rotation is to familiarise the student with the diagnosis and treatment of common disorders of the eye. The student will be taught to measure visual acuity, the use of charts to test visual acuity and how to use the ophthalmoscope. This is a six (6) week programme concurrent with otorhinolamagology.

Objectives

The student will be expected to acquire competence in the following:

1. To measure and record distant visual acuity specifically:
 - By the use of a Snellen chart (letters, numbers, or illiterate E).
 - By use of the hands or flashlight when visual acuity is less than that recordable by the Snellen chart, or when the patient is unco-operative, e.g. during childhood.
 - By the use of near vision cards or any other printed material when distance testing is not possible.
 - To determine whether reduced visual acuity may be due to an uncorrected refractive error, by reducing the effect of that error upon distance visual acuity by the use of a pinhole occluder.
 - To determine whether reduced visual acuity may be due to opacity in the transmitting media of the eye through the use of external illumination and ophthalmoscopy.
 - To measure and record colour vision by the use of the Ishihara or Hardy-Rand-Rittler plates.
2. To perform ophthalmoscopy, specifically:
 - To use the direct ophthalmoscope for a systematic examination of the ocular fundus.
 - To describe the characteristics of the normal ocular fundus.
 - To identify abnormalities of the optic nerve, retinal blood vessels, retinal background and macula.
 - To relate abnormalities of the ocular fundus to ocular, neurologic and systemic diseases in order to provide appropriate management or referral.
- 3.. To recognise amblyopia or strabismus, specifically:
 - To detect strabismus by gross inspection, the corneal light reflection test, and the cover test.
 - To perform ophthalmoscopy on a child, in order to rule out organic causes of impaired vision when amblyopia is suspected.
 - To explain to parents the need for prompt treatment of their child's amblyopia.
- 4 To evaluate a patient with a red eye, specifically:
 - To perform the necessary diagnostic steps to recognise the danger signs involved in the interpretation of findings.
 - To understand the serious complications of prolonged use of topical anaesthetic drops and of corticosteroids.
 - To describe the treatment for cases appropriate for treatment by the primary care physician and to recognise more serious problems, which should be referred.
5. To evaluate the ophthalmologic sign of neurologic disorders, specifically:
 - To take an ocular and neurologic history.
 - To measure and record visual acuity.
 - To assess pupillary function and to discriminate between afferent pupillary defects.
 - To find visual field defects by confrontation techniques.
 - To assess ocular movements and detect indications of impairments of cranial nerves III, IV and VI.
 - To recognise, on ophthalmoscopic examination, neurologically significant abnormalities, including swelling and atrophy of the optic nerve head.
6. To recognise common ocular or orbital injuries, and determine which need to be referred for the prompt attention of an ophthalmologist, specifically:
 - To recognise which problems are urgent enough to dictate that urgent treatment take precedence over detailed history taking, e.g. chemical burns of the eye, penetrating injuries of the globe, lid lacerations and hyphemas.
 - To deduce which facts are salient. These include time and place of injury, circumstances e.g. blunt or sharp trauma, acid or alkali burn, a history of previous eye conditions, drug allergies and tetanus immunisation.
 - To examine the traumatised eye and record the visual acuity as accurately as possible.
 - To decide which injuries should be referred for specialist management.

7. To measure the intra-ocular pressure with a Schiötz tonometer and to evaluate the nerve head, particularly with regard to the presence of glaucoma, specifically:
- To describe the concept of intra-ocular pressure, why this pressure could rise and how elevated pressure may be lowered.
 - To describe the damage elevated intra-ocular pressure may cause to the optic nerve and to vision.
 - To recognise characteristics of the optic disc useful in determining whether a disc is normal or abnormal.
 - To determine how a Schiötz tonometer functions and its application to the measurement of intra-ocular pressure.
 - To properly perform tonometry on a patient, record the results, and decide whether referral is necessary.
 - To explain why screening methods to detect glaucoma are important.

MD344 [MEDC5344]

ANAESTHESIA AND INTENSIVE CARE

(4 weeks)

Course Description

This rotation is geared to provide a thorough grounding in the fundamentals of anaesthesia and intensive care. Students will be assigned to outpatient clinics, operating room sessions and emergency duty in accordance with the roster. Students are expected to administer at least four (4) anaesthetics during the clerkship. Lectures take place at the Eric Williams Medical Sciences Complex weekly.

Objectives of the Rotation in Anaesthesia, Intensive Care & Pain Management

1. The student will be able to perform effective cardiopulmonary resuscitation using a bag and mask to support the patient's ventilation, and external cardiac compression to support the patient's circulation. The student will be exposed to advanced cardiac life support and will be able to recognize cardiac arrest rhythms, know the correct intervention and drug therapy, and safely perform defibrillation.
2. The student will be able to evaluate pre-operative patients describing those findings which may influence the course of anaesthesia. This will include anatomical, physiological, pathological and pharmacological factors. He/she will be able to determine if the patients are in optimal physical condition and evaluate anaesthetic risk and physical status. The student will also be able to write rational pre-anaesthetic orders and be able to defend those orders.
3. When assigned to patients in the Operating Theater, the student will apply knowledge to the principles of intra-operative care to include the basic concept of how physiological, pathological and pharmacological processes are affected by, and interact with, commonly used anaesthetic drugs and techniques.
4. The student will know the indications for use of intra-op monitoring devices and will be aware of the complications. The student will be able to effectively apply and utilize basic monitoring devices in theatres.
5. The student will be able to evaluate and care for any comatose/defenseless patient whether this is during an anaesthetic or from some other cause.
8. The student will be able to discuss the major regional and local anaesthetic techniques used in this hospital, their indications, advantages and disadvantages, complications and treatment of complications.
7. The student will have knowledge of oxygen therapy, its indications and hazards, and be able to administer this agent effectively when required.
8. The student will be able to discuss the major regional and local anaesthetic techniques used in this hospital, their indications, advantages and disadvantages, complications and treatment of the complications.
9. The student will be able to identify the type of patient who would benefit from intensive care and be able to efficiently and safely refer such a patient to a hospital offering this facility.
10. The student will be able to identify the role the anaesthetist plays in the care of the hospitalized patient.
11. During the clerkship, the students will be expected to observe and perform several clinical procedures under the supervision of specialist anaesthetists at the Port-of-Spain General Hospital, the San Fernando General Hospital and the Eric Williams Medical Sciences Complex. Tutorials are held two or three times per week at the Eric Williams Medical Sciences Complex.

12. Clinical exposure will be obtained through outpatient clinics, operating room sessions, and emergency duty in accordance with the timetable. Students are expected to document at least four (4) anaesthetic cases in which they assisted during the clerkship. The supervising anaesthetist must certify these reports.
13. A number of topics are covered on an annual basis in a lecture format. These are held in Amphitheatre A of the Eric Williams Medical Sciences Complex on a Saturday morning. The dates will be announced during the course of the year.
14. A worksheet is provided for the student to document procedures performed and procedures observed. This must be returned to the Department at the end of the Clerkship. The students should have an understanding of the indications and contra-indications, precautions and complications of performing the procedures.
15. The students will work in groups on research projects and case reports which will be presented during the last week of the clerkship. These presentations will contribute to the final assessment.
16. Student Assessment at the end of the clerkship will take the form of a written paper with Multiple Choice Questions, Extended Matched Questions and an essay as well as an OSCE exam.

Undergraduate Lecture Topics

Management of Cerebro-Cardiopulmonary Resuscitation
Perio-operative Fluid and Electrolyte Management

History of Anaesthesia, Intensive Care & Pain Management
Blood Gases and their Interpretation

Shock and its Therapy
Blood Transfusion

Respiratory Failure
Airway Management

Transport of the Critically Ill Patient
Management of the Critically Ill Patient

Treatment of Poisoning - General Principles
Neurological Disorders in Intensive Care Unit

Acute Pain Relief – its Indications and Management
An introduction to Chronic Pain

Ethical Dilemmas in Anaesthesia & Intensive Care
Anaesthesia for Ambulatory Surgery

General Anaesthesia for Patients with co-existing diseases
General Anaesthesia versus Regional Analgesia

A look at Past Exam Papers

In addition, the Anaesthesia and Intensive Care Unit provides programmes in the following areas:

Year 1

Skills Training: Basic Life Support

- School of Medicine
- School of Dentistry
- School of Veterinary Medicine
- Pharmacy Programme

Examination of this skill is done in Year 3 at the Phase 1 examination.

Year 2 – School of Medicine

Supervision of research projects in collaboration with
Community Health.

Year 5 – School of Dentistry

10-week series of formal lectures including the following topics:

Preoperative Anaesthetic Assessment & Pre-medication

Inhalation Agents & Relative Analgesia
Intravenous Induction Agents & Sedation Techniques
Neuromuscular Blocking Agents
Analgesic Agents & Dental Analgesia
Airway Management in Dental Anaesthesia
Management of Cardiopulmonary Resuscitation
Cardiopulmonary Resuscitation in Skills Lab
Anaesthesia for Dental Surgery
Post-operative Complications

Exam in Dental Anaesthesia – Internal Assessment

Skills Training: Advanced Life Support

Assessment

At the end of the lecture schedule, assessment will be done by means of an MCQ paper.

STUDENT PRIZES

The following prizes are awarded to clinical students:

Janssen-Cilag Prize

Criterion: Best overall performance in the OSCE
(Objective Structured Clinical Examination)
Year of Study: Year 3

Professor Rolf Richards Memorial Prize (Donated by Medical Associates Hospital)

Criterion: Best Clinical Student in
Medicine and Therapeutics
Year of Study: Final MB BS Examinations

Dr. Fiona Phelps Prize

Criterion: Most outstanding Clinical Student
in Obstetrics and Gynaecology
Year of Study: Years 4 and 5

Dr. Chapman Boyd Prize

Criterion: Most outstanding in Community Health
Year of Study: Year 5

Astra Zeneca Prize

Criterion: Most outstanding in Anaesthesia
Year of Study: Year 5

Mepha Pharmaceutical Company Prizes

Criterion: Most outstanding student in Surgery
Year of Study: Year 5

Mepha Pharmaceutical Company Prizes

Criterion: Most outstanding student in Orthopaedics
Year of Study: Year 5

Dr. Zulaika Ali Prize

Criterion: Most outstanding student in the OSCE
section on the Final MB BS examination in
Medicine and Therapeutics
Year of Study: Year 5

Other Prizes/Awards

Prizes/awards are also offered to students in the Pre-clinical programme.

9. SCHOOL OF DENTISTRY

DOCTOR OF DENTAL SURGERY (DDS) PROGRAMME *(GOVERNED BY THE FACULTY 1999 REGULATIONS)*

INTRODUCTION

The undergraduate programme leading to the degree of Doctor of Dental Surgery occupies five years of study and is divided into two Phases. **Phase I** is devoted to the study of the basic medical and dental sciences and spans the first two years (4 semesters). The first three semesters are taught in co-operation with the School of Medicine as a common programme for dental, medical and veterinary students, and utilises a Problem Based Learning (PBL) methodology. Subjects included in this part of the programme are Anatomy, Physiology, Biochemistry, Pharmacology, General Pathology and Microbiology, Community Health, Behavioural Sciences, Sociology of Health, Epidemiology and Biostatistics. Students undertake a module of Skills Training, which focuses on interviewing and clinical examination techniques. In addition, there are 10 hours of dedicated dental instruction in Oral Biology and 10 clinical orientation sessions in the Dental Hospital that form an introduction to the Clinical Dentistry unit.

The second semester of the second year (semester 4) is devoted to specialist dental topics including Regional Head and Neck Anatomy, Dental Materials Science, Oral Biology, Core Radiology and a laboratory-based unit of instruction in basic Operative Dental Techniques. This laboratory experience equips students with the clinical skills and acumen necessary to commence treatment of patients from the beginning of the third year and **Phase II** of the DDS programme. The three clinical years leading to graduation involve supervised patient management in all spheres of dentistry, and study of the causes, management and prevention of oral and dental diseases.

If a student's entry into year 3 is delayed by two years or more, he/she is required to repeat the Phase I B Dental course and the respective examination. At the beginning of semester 1, year 3 of the DDS programme students are required to purchase a hand piece kit and other clinical and laboratory instruments that would be the property of the student. These instruments will be useful when they set-up their practice. The kit will cost approximately US\$2000 and can be purchased through the office of the Director, School of Dentistry.

A student whose attendance falls short of 75% of sessions in Year 3 or who fails to meet the course requirements and/or is unsuccessful in the end of course assessments and repeat examinations that year, will be required to repeat year 3. A student whose attendance falls short of 75% of sessions in

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Year 4, or who fails to meet the course requirements and/or is unsuccessful in the end of course assessments and repeat examinations that year, would be required to repeat Year 4. Any student whose attendance falls short of 85% in any clinical rotation will not be eligible to appear for the final DDS examination. Such a student is required to repeat the clinical year. The clinical training of students from Year 3 to Year 5 is monitored by way of accomplishment of clinical quota and competency in each discipline. If students fail to accomplish the quota required to achieve competency in respective clinical years of the DDS program, they are not allowed to progress from one clinical year to another or take the final year examination, as the case may be.

Each student's progress is carefully monitored during all stages of the programme and one-to-one assistance is afforded, as necessary, from members of the academic staff. Student support services are comprehensive and readily available at the Medical Complex and also at the main Campus in St. Augustine.

Following graduation, there is a one-year **Phase III** programme of pre-licensure Internship in General Dentistry to prepare students for the independent practise of dentistry and eligibility for registration with the Dental Council. The Phase III programme is currently being re-designed to adopt a **Vocational Training** theme. Any intern whose attendance falls short of 85% in any of their clinical rotations will not receive the certificate of completion of the pre-licensure internship in General Dentistry, thus delaying their registration with the Dental Council of Trinidad & Tobago. In such instances, the intern will have to repeat stipulated period(s) of the internship programme as deemed fit by the School.

SUMMARY OF THE DDS UNDERGRADUATE PROGRAMME

Semester	Year 1	Year 2	Year 3	Year 4	Year 5
1	Phase I Blocks	Phase I Blocks	Clinical Dental Science	Clinical Dental Science	Clinical Dental Science
	Oral Biology	Oral Biology	Human Disease		
2	Phase I Blocks	Pre- Clinical Dental Studies	Clinical Dental Science	Clinical Dental Science	Clinical Dental Science
		Oral Biology	Human Disease		
		Core Radiology			

Semester	Phase IA	Dental Phase IB Incl. Operative Dental Techniques I & Dental Materials Science	Dental Phase II Part 1 Human Disease	Dental Phase II Part 2 Dental Subjects

PHASE IA

Details of the structure and contents of this part of the programme, as it relates to dental students, are given on pages 30 to 34.

The second semester of the second Year is almost exclusively devoted to the study of dental pre-clinical subjects. The units included are as follows:

- **DD100** Head & Neck Anatomy
- **DD101** Oral Biology
- **DD102** Dental Materials Science
- **DD103** Operative Dental Techniques I
- **DD205 (part)** Core Radiology
- **DD206** Dental Local Anaesthesia & Tooth Removal

DD100 [DENT2100] HEAD & NECK ANATOMY (60 hours)

This unit aims to consolidate information taught in the various Phase IA blocks to provide an understanding of the detailed 3-dimensional structure of the head and neck region that is so important to dentists. This Unit of Anatomy provides tutorials and practical demonstrations. Teaching is supported within the School of Dentistry using interactive CD-ROM programmed learning.

DD101 [DENT1101] ORAL BIOLOGY (120 hours)

Oral Biology includes tooth morphology, oral anatomy & embryology, oral histology, oral physiology and oral biochemistry. The unit offers study of the gross and microscopic structure of all the components that participate in the stomatognathic system. Physiological and biochemical aspects are included. The embryological development of the face and oral cavity, teeth and associated structures are traced from conception. These studies form the basic concepts of normal structure and function that enable deviations representing oral and dental disease to be studied in later units of oral pathology and oral medicine. Understanding growth and the establishment of occlusion through the childhood to the permanent adult dentition is fundamental to future studies of child dental health (paediatric and preventive dentistry) and the correction of malocclusions (orthodontics). The unit involves lectures and laboratory sessions.

DD102 [DENT2102] DENTAL MATERIALS SCIENCE (40 hours)

Knowledge of the behaviour and properties of dental material used clinically and in the laboratory enables appropriate choice of materials and their correct handling to give optimal results for an individual patient's care. Basic physical and chemical properties are studied from a structural and colloidal science aspect and the influence these have upon the mechanical handling properties of dental materials in current use.

DD103 [DENT2103] OPERATIVE DENTAL TECHNIQUES I (170 hours)

This integrated unit provides theoretical, laboratory and clinical experience of the basic principles of restorative dentistry including conservation, periodontology, removable prosthodontics and dental technology. The preparation and restoration of teeth with amalgam and tooth-coloured materials is practiced in both laboratory and clinical settings. The unit gives special attention to the biological aspects involved in the restoration of teeth, with emphasis on preservation of the vital tooth tissue plus prevention and maintenance of the health of the supporting oral tissues. Particular reference is made to the selection of appropriate restorative materials and this cross-references with the DD 102 (Dental Materials Science) unit. Diagnosis and treatment planning in restorative dentistry is introduced in lectures, seminars and clinics. A special sub-unit of operative dentistry for children is included along with an introduction to orthodontics. This unit must be successfully completed prior to the commencement of supervised patient management in the clinics.

DD205 (part) [DENT2205] CORE RADIOLOGY (60 hours)

As an essential requirement prior to clinical practice, all students must undertake a core unit of teaching concerning radiation physics, radiation dosages, radiation safety and diagnostic oral radiographic examination techniques. The unit includes film properties, quality assurance, processing and storage plus film-fault avoidance. Clinical demonstrations are included. An internal assessment must be passed at the end of the unit as a prerequisite to commencing patient clinic rotations.

DD206 [DENT206] DENTAL LOCAL ANAESTHESIA & TOOTH REMOVAL

(40 hours, approx. personal learning time)

As the vast majority of operative dentistry requires effective pain control, this unit provides a basic introduction to the pharmacology, indications, contra-indications and techniques of dental local anaesthesia. The fundamental principles involved in the forceps removal of teeth are learned in parallel. These units are provided as interactive self-learning programmed teaching material in the form of CD-ROM (local anaesthesia) and written programmed text (tooth removal). Students may purchase their own copies of these programmes for home study. This is supplementary to the programmes being freely available in the School's Computer Assisted Learning (CAL) Laboratory or The Medical Sciences Library. This unit is supported with clinical demonstrations. Passing an internal assessment at the end of the unit is another prerequisite to commencing patient clinic rotations.

Prior to the commencement of patient management in the clinics, students are normally required to purchase some personal dental instruments valued at US\$1,200.00.

PHASE II Part 1 - YEAR 3

Only after having successfully completed the Phase IA and Phase IB examinations, students embark upon the clinical Phase II programme. Part 1 commences in the third year with a four-week period of orientation and introduction to the hospital clinics. Students are made familiar with the clinical procedures, patient appointment system, clinical records, their responsibilities and the regulations governing the treatment of patients under supervision. Acceptable dress codes and professional behaviour demands are emphasised. There is an introductory lecture series on Ethics, Confidentiality and Professionalism. It is during this period that the internal examinations in Dental Local Anaesthesia / Tooth Removal and Core Radiology are taken. Clinic rotations involving patient management commence after successful completion of this clinical introduction period. The clinical dental science units of instruction presented during the third year are as follows:

- **DD200/DD201** Preventive Dentistry/Dental Public Health
- **DD202** Periodontology I +
- **DD203** Conservative Dentistry I +
- **DD205** Oral Radiology +
- **DD207** Prosthodontics I +
- **DD208** Orthodontics I +
- **DD209** Paediatric Dentistry I +
- **DD210 /211** Human Disease (General
Medicine, General Surgery)*

- + = Internal Assessment Examinations
contribute to the Final Examinations
- * = Subject of Professional Examinations in May

DD200 [DENT3200] PREVENTIVE DENTISTRY (80 hours)

A unit devoted to the concepts, principles and methods of prevention of dental diseases with emphasis on primary preventive measures, especially for children and nursing mothers.

DD201 [DENT3201] DENTAL PUBLIC HEALTH (80 hours)

This unit explores the development of appropriate attitudes, awareness and sensitivity to oral health care and service provision as a public health measure. The characteristics and scope of dental public health activities along with the principles of epidemiology and biostatistics in assessing the oral and dental health care needs of a community are discussed. Dental public health research techniques are explained. The application of managerial skills to optimally utilise auxiliary personnel to achieve high quality, evidence-based oral health care is considered.

[For details of DD202, 203, 205, 207, 208 & 209 - see below.]

DD210/ 211 [DENT3210] [DENT3211]

GENERAL MEDICINE/

GENERAL SURGERY (160 hours)

General Medicine and Surgery are important aspects to understand for the safe and appropriate management of dental patients who have general systemic disease. This includes awareness of how general medical and surgical conditions affect the choice of treatment or medications that a dental patient may require. Study of general Clinical Pathology and Clinical Microbiology form the basis for future studies of Oral Pathology, Oral Medicine and Oral Surgery as well as providing an understanding of the known mechanisms underlying the systemic diseases studied. Clinical pharmacology is an important component within this unit. Prescribing drugs for dental patients, who are already taking medications for some medical reason, must avoid adverse drug reactions occurring or interference with the patient's background medical management. The consequences of such interactions may be life threatening for the patient and result from incompetent management of a relatively less important dental related problem. Dentists must also be able to detect signs of undiagnosed medical disease in their patients. This skill must rely upon recognition of such signs from the exposed parts of a dental patient's body that are normally visible during a dental consultation. The unit is delivered using a combination of lectures, seminars, ward rounds and clinical / laboratory sessions.

PHASE II Part 2 – Years 4 & 5

During the fourth (4th) and fifth (5th) years clinical experience in the various patient clinics continues. By the end of the fourth (4th) year, the majority of the primary didactic teaching is completed. This includes an advanced laboratory-based unit of advanced restorative dentistry (**Operative Dental Techniques II**) that includes Crown & Bridge design and construction. The fifth (5th) year is devoted to in-depth study of all Clinical Dental Science subjects to develop wider and deeper understanding. This is achieved through topic teaching, case analyses and clinical conundrums using Problem Based Learning (PBL) methodology. It should be realised that every patient encountered is in itself a PBL exercise.

The units studied during the fourth (4th) and fifth (5th) years are as follows:

DD204	Oral Pathology
DD205	Oral Radiology
DD300	Oral Medicine
DD301	Oral & Maxillofacial Surgery
DD302	Periodontology II
DD303	Prosthodontics II
DD304	Conservative Dentistry II
DD305	Orthodontics II
DD306	Paediatric Dentistry II
DD307	Ethics, Law & Jurisprudence (5 th Year only)

DD202 & DD302 [DENT3202] [DENT4302] PERIODONTOLOGY (260 hours)

These units explore the biology and pathology of the periodontal tissues as well as the techniques of disease prevention, diagnosis and management.

DD203 & DD304 [DENT3203] [DENT4304] CONSERVATIVE DENTISTRY (470 hours)

Operative (Conservative) Dentistry involves the restoration of tooth structure and function following the ravages of dental caries (decay), trauma or correction of developmental defects. Topics include preventive aspects and cariology, pulpal injuries and therapy, crown & bridge, root canal therapy (endodontics) and cosmetic dentistry, including the use of veneers. Extra-coronal and intra-coronal restoration of teeth using tooth coloured materials, ceramics and precious or semi-precious metals are studied and practised.

DD204	Oral Pathology
DD205	Oral Radiology
DD300	Oral Medicine
DD301	Oral & Maxillofacial Surgery

*These subjects are taught as an integrated unit of didactic lectures termed **ORAL DISEASES** (300 hours). The unit is delivered during the fourth (4th) year and is supported with clinical experience in the fourth (4th) and fifth (5th) year clinical rotations through the Oral Surgery, Oral Diagnosis, Oral Medicine & Emergency, Adult and Child Dental Health clinics.*

Oral Pathology is the specialist branch of Dentistry that deals with the mechanisms, identification (chiefly histopathological) and prevention of oral and dental disease processes. The wider systemic effects of the diseases studied are explained. The subject matter includes Oral Microbiology, Dental Therapeutics and Forensic Dentistry.

Oral Radiology studies the use and interpretation of imaging techniques for oral and dental diagnosis. The techniques include the use of X-rays and plain photographic film, Computerised Axial Tomography (CAT), Radioisotope Scanning and Magnetic Resonance Imaging (MRI).

Oral Medicine is the branch of Dentistry that encompasses, with Oral Pathology, the study of the aetiology, pathogenesis, investigation, diagnosis, prevention and management of orofacial diseases. It is a relatively new speciality of Dentistry that has arisen due to (a) an increasingly ageing population, (b) advances in medical and surgical sciences and (c) lifestyle changes that have led to the emergence of previously unseen diseases. A typical example of the latter is the advent of the human immunodeficiency virus (HIV) that has resulted in an entirely new pattern of orofacial diseases, which places the responsibility for early recognition and competent management directly at the door of every general dental practitioner's office. The realisation that oral health is important in patients with systemic diseases is also growing. That oral health is an integral part of total body health and, therefore, the health of a community, means the role of a modern dental surgeon has changed from an essentially restorative discipline to that of an oral physician. The implications of systemic diseases, in the presentation and possible special management of dental patients, are fully explored.

Oral & Maxillofacial Surgery studies the surgical management of oral and dental disease including the surgical management of oral cancer and subsequent reconstructive techniques, correction of facial deformity, cleft lip and palate surgery as well as surgery involving the temporomandibular joints and salivary glands. Elements of plastic surgery are included.

DD207 & DD303 [DENT3207] [DENT4303] PROSTHODONTICS

Prosthodontics involves the replacement of missing dental tissues that have been lost due to disease, trauma or developmental causes using removable appliances. The unit includes study of specialist prosthodontic techniques used for facial reconstruction and obturation of residual palatal clefts. This cross-references with aspects of Oral & Maxillofacial Surgery. Each prosthesis must be individually designed for each patient to restore, as far as possible, normal masticatory (chewing) function, facial aesthetics, speech and related psychological functions. The use and fabrication of removable partial and complete dentures is practiced in laboratory and clinical environments.

DD208 & DD305 [DENT2206] [DENT4305] ORTHODONTICS (120 hours)

These units study the causes, prevention and management of disturbances of dental occlusion arising from disharmony between jaw size and tooth size/number. Growth pattern studies through childhood to the adult stage are important to understand the prognosis of orthodontic treatment in each patient. There is a strong aesthetic and psychological component to this type of dental treatment. The lecture series covers early interceptive orthodontic treatment, re-alignment of teeth by tilting or rotation methods and consideration of Maxillofacial Surgery referral. The use of removable and fixed appliance techniques is studied. The unit is supported with clinical and laboratory experience.

DD209 & DD306 [DENT3209] [DENT4306] PAEDIATRIC DENTISTRY (120 hours)

Paediatric Dentistry considers the differences between the dental treatment of children compared with that of adults. Topics included are common childhood diseases, the management and prevention of dental trauma and rampant dental caries. Preventive techniques such as dietary analysis, fluoride use and fissure sealant therapy are practiced. The dynamic and continuous changes in the dentition and occlusion of children, due to growth and development, are studied. The approach to the behavioural management of the normal and handicapped child dental patient is also examined in detail. The unit is supported with clinical and laboratory experience.

**DD307 [DENT5307]
DENTAL ETHICS, LAW &
JURISPRUDENCE in Year 5 (36 hours)**

In Year 5, Ethics considers the manner and habits of man; the rules or principles that govern correct conduct; the science of moral obligation; the system of moral principles and the morality of one's conduct toward others, and specifically the principles governing the professional conduct of dentists in relation to their patients and to society. The rights, duties and responsibilities of dentists and their patients are discussed. The application of the principles of law and justice as they relate to the practice of dentistry is studied along with the statutory Dental Profession Acts of Parliament.

THE FINAL DDS PHASE II, Part 2 EXAMINATIONS

These take place in May/June of the Final (5th) Year. Re-sits are held in November/December.

There are **THREE SECTIONS**:

- **SECTION I RESTORATIVE DENTISTRY (DD320)**
DD320 Comprising of DD202, DD203, DD207, DD302, DD303 and DD304
- **SECTION II CHILD DENTAL HEALTH (DD330)**
DD330 Comprising of DD200, DD201, DD208, DD209, DD305 and DD306
- **SECTION III ORAL DISEASES (DD340)**
DD340 Comprising of DD204, DD205, DD206, DD300 and DD301

Each Section comprises:

- a. Written Paper
- b. Clinical Examination
- c. Viva voce examination

Candidates who do not reach the minimum (50%) pass mark required in each of the written and clinical examinations in each Section, at one and the same sitting, shall fail that part.

Candidates are required to re-sit **all** the components of any one Section failed. For a second attempt, the Internal Assessment mark in the Section(s) failed will be carried forward. For a third attempt, the entire Final Year must be repeated in the Section(s) failed and a new, pass-level, Internal Assessment mark obtained.

WRITTEN PAPERS

Each written paper will consist of FOUR essay or short-answer type questions covering the related course codes. All questions must be attempted. Model answers will be provided to the Examiners indicating how accumulation of marks will be determined. The usual External Examiner scrutiny applies.

CLINICAL EXAMINATIONS

- **SECTION I - RESTORATIVE DENTISTRY (DD320)**
Candidates will be required to present to, and discuss with, the examiners TWO adult cases for which they have carried out restorative treatments over a period of time. Case 1 shall be a patient where the provision of a course of comprehensive treatment, involving several aspects of restorative dentistry, has been completed. A logbook of the treatment given at each appointment together with the initial examination, history and treatment plan shall be presented to the Examiners. Any subsequent alterations to the initial treatment plan should be accounted for, with reasons.

The other Case II, shall be a presentation to the examiners of a completed upper and lower cobalt-chromium partial denture prosthodontic case with a treatment logbook as for Case I.

Both patients must be selected, and approved as suitable, in consultation with the Internal Examiners concerned.

- **SECTION II - CHILD DENTAL HEALTH (DD330)**
Candidates will be required to present to, and discuss with, the examiners TWO child cases for which they have carried out treatment over a period of time. Case 1 shall be a patient where the provision of a course of comprehensive treatment, involving several aspects of Paediatric Dentistry, including Preventive Dentistry, has been completed. A logbook of the

treatment given at each appointment together with the initial examination, history and treatment plan shall be presented to the Examiners. Any subsequent alterations to the initial treatment plan should be accounted for, with reasons.

The other case must present an orthodontic case, with a treatment logbook as for Case 1. Both patients must be selected, and approved as suitable, in consultation with the Internal Examiners concerned. Patients need not attend the final clinical examinations.

• **SECTION III - ORAL DISEASES (DD340)**

Candidates will be presented with a previously unseen case, take a full history, perform a clinical examination and formulate a treatment plan. The case will then be discussed with the Examiners.

VIVA VOCE EXAMINATIONS

These will involve a 15-minute discussion with the examiners relating to the subject matter concerned.

INTERNAL ASSESSMENTS

These will be conducted by each of the clinical dental divisions concerned and involve patient, laboratory and theoretical evaluations as well as professionalism, punctuality and clinic attendance. **Candidates who fail to meet the required 50% pass mark in an Internal Assessment shall not be permitted to enter for any of the Final Examinations.**

Each internal assessment contributes 32% (80 marks of 250) towards the overall final mark in each Section of the Final Examinations. The assessments will be scrutinised by the External Examiner concerned.

In each Section of the Final Examination, the Internal Assessment mark will be derived as follows:

RESTORATIVE DENTISTRY:

- Periodontology
20 marks
- Conservation/Endodontics
20 marks
- Prosthodontics
20 marks
- Crown & Bridge
20 marks

NB. *Ethics & Jurisprudence* is included here. The end of course internal assessment in this subject MUST be passed

CHILD DENTAL HEALTH:

- Paediatric Dentistry
20 marks
- Orthodontics
20 marks
- Preventive Dentistry
20 marks
- Community Dentistry/ Dental Public Health
20 marks

ORAL DISEASES:

- Final Examination of the Oral Disease Unit (4th Year)
15 marks
- Oral Surgery & Dental Radiology examination (5th Year)
15 marks
- Oral Disease viva voce examination (5th Year)
25 marks
- Oral Medicine Clinical examination (5th Year)
25 marks

Summary of marks allocation for the Final DDS PHASE II, Part 2 Examinations

TOTAL 750 Marks

SECTION I
RESTORATIVE DENTISTRY
250 MARKS; PASS = 50%

WRITTEN PAPER
100 MARKS
(40% of Section I)
Minimum pass mark = 50%

CLINICAL
50 MARKS
(20% of Section I)
Minimum pass mark = 50%

VIVA VOCE
20 marks
(8% of Section I)

INTERNAL ASSESSMENTS

80 MARKS

(32% of Section I)

Minimum pass mark = 50% to enter the Final Examinations.

SECTION II

CHILD DENTAL HEALTH

250 MARKS; PASS 50%

WRITTEN PAPER

100 MARKS

(40% of Section II)

Minimum pass mark = 50%

CLINICAL

50 MARKS

(20% of Section II)

Minimum pass mark = 50%

VIVA VOCE

20 marks

(8% of Section II)

INTERNAL ASSESSMENTS

80 MARKS

(32% of Section II)

Minimum pass mark = 50% to enter the Final Examinations.

SECTION III

ORAL DISEASES

250 MARKS; PASS = 50%

WRITTEN PAPER

100 MARKS

(40% of Section III)

Minimum pass mark = 50%

CLINICAL

50 MARKS

(20% of Section III)

Minimum pass mark = 50%

VIVA VOCE

20 marks

(8% of Section III)

INTERNAL ASSESSMENTS

80 MARKS

(32% of Section III)

Minimum pass mark = 50% to enter the Final Examinations.

**INTENTION MARKING SCHEME TO BE USED
FOR ALL EXAMINATIONS & ASSESSMENTS**

This system uses performance-related NUMERICAL GRADES to assign a final recorded percentage mark, for each assessment or examination, as follows:

- **Minus 3** Question not attempted (*Written Papers, only – where 4 questions are to be answered*)
- **0** Failed attempt
- **2** Raisable to PASS
- **3** Pass
- **4** Good Pass
- **5** Honours
- **6** Distinction

10. SCHOOL OF VETERINARY MEDICINE

AIMS OF THE FIRST THREE YEARS

Our aims for the first three years are ambitious and can be stated in broad terms.

YEAR 1

In the first year, an Integrated Basic Health Sciences Course is presented. The various structures of the animal body, their relationship to one another and distinguishing features between the common domestic animals are to be presented (**Anatomy**). The mechanisms of communication within the body and maintenance of a stable internal environment (**Physiology**), and the chemical and molecular basis of these functions are covered (**Biochemistry**). In addition, Biostatistics, the application of statistics to biological data is covered. All students will be required to take a short course in Health Information Management and Retrieval in order to fully utilise the information services and learning resource materials at the Medical Sciences Library (**Health Informatics**). All students are required to complete foundation courses (these courses are: **Caribbean Civilisation; Law, Governance, Economy and Society; and Communication Skills**) as set out by The University of the West Indies. The **Clinical Skills Programme** is introduced from Year 1.

YEARS 1-3

Clinical Skills

This course is offered to students in Years 1, 2 and 3. The main objective of this course is to prepare the students with the clinical skills required for the clinical rotations, and also to assist them with techniques which they must recognise in the seeing practice externship. This is a practical course and each student's participation is expected. There will be an examination (practical and written) at the end of the course, which all students must pass.

In the first year, students will gain experience in restraining and performing a physical examination on various species (dogs, cattle, sheep, horses, pigs, laboratory animals).

In the second year, students are shown how to administer medication parenterally.

In the third year, various diagnostic and examination procedures are performed, e.g., examination of the oral cavity, otoscopic and ophthalmic examinations, milk sample, urine collection, etc.

YEAR 2

During the second year, there is continuation of the basic sciences – **Anatomy, Physiology, and Biochemistry**. In this year, students are introduced to the various causes of disease and the interaction between the factors that cause disease (**Pathology**). The biology of viruses, bacteria and other micro-organisms (Microbiology), and that of various internal and external parasites (**Parasitology**) are dealt with. The principles of drug action and administrations (**Pharmacology and Therapeutics**) are dealt with in this year. Principles of Livestock Production, Agricultural Economics, Animal Nutrition, Genetics and Behaviour are presented (**Animal Production**). The Clinical Skills Training Programme will be continued in Year 2.

YEAR 3

In this year, students delve further into the Para-clinical topics (**Pathology, Microbiology, Parasitology and Toxicology**) and learn the principles of Clinical practice (**Medicine & Surgery**). Students are introduced to **Avian Diseases and Diseases of Non-domestic Animals**. The Clinical Skills Training Programme will be completed in Year 3.

YEAR 1

VM100 [VETM2100] [VETM2101] VETERINARY ANATOMY I & II 327 hrs

VM 100 comprises the Veterinary Anatomy Component of the 1st year programme. It is taught in modules in four blocks: MD10A, MD10B, VM11A, VM11B. The areas covered are Veterinary Histology, Veterinary Embryology and part of Veterinary Gross Anatomy. General Histology, (histology of basic tissues) and General Embryology are taught as common courses to MB BS, DDS, Pharmacy and Veterinary students in blocks MD10A, and MD10B, Systemic Histology and Embryology of the digestive system and related organs are taught in course VM11A block; and the Systemic Histology and related organs of the cardiovascular and renal systems are taught in VM11B. In addition, the integumentary, reproductive, urinary, respiratory and endocrine systems are also taught during courses VM11A and VM11B. A total of 120 hrs of embryology and veterinary histology are completed in Year 1. Veterinary Gross Anatomy is also taught in courses VM11A and VM11B. The Gross Anatomy of the digestive system and related organs including the abdominal wall, peritoneal lining and folds is taught in course VM11A. In course VM11B,

the organs of the thoracic wall, pleural lining and the mediastinum are taught. Courses VM11A and VM11B are taught exclusively to veterinary students in the form of Problem Based Learning activities, Lectures and Practicals (lab sessions).

VM105 [VETM1105] BIOSTATISTICS AND COMPUTER SCIENCE 30 hrs

This course introduces students to basic statistical terminology and procedures. Topics covered include measures of central tendency and dispersion, types of variables, type I and II errors, P Values and their interpretation, enumeration statistical methods, t-tests, ANOVA, regression analysis, applications of procedures in medical and agricultural sciences. Use of Excel to create print files for use with statistical packages.

YEAR 2

Please note that VM11C: Animal Production I and VM11D: Animal Production II replace VM110: Animal Production.

VM11C [VETM2110] ANIMAL PRODUCTION I 90 hrs

This course introduces students to some of the major considerations in setting up a small business e.g. veterinary practice. The course content comprises Introduction to Economic and Management Concepts, Animal Breeding, Animal Nutrition, Animal Welfare. The business side of farming is also emphasised. Other components of the course include principles of nutrition, animal breeding, and animal welfare issues.

VM11D [VETM2111] ANIMAL PRODUCTION II 110 hrs

This course introduces students to the principles of nutrition and management as they apply to production and efficiency. Common husbandry practices associated with food animals are taught. The role of the consuming public and its influence on the production of food are taught and emphasised. It also introduces students to basic management principles for dogs, cats and horses. Course content consists of monogastric livestock production, ruminant livestock production and production and management of non-food animals, wildlife and exotic animals.

VM120 [VETM2120]

**VETERINARY PHYSIOLOGY/
BIOCHEMISTRY**

30hrs

This course is an intensive one using both PBL and lecture approaches to provide the students with a strong foundation for understanding and integrating basic, comparative physiological mechanisms and concepts of neural, endocrine, respiratory, reproductive and thermo-regulatory physiology. It also allows the students to gain a fundamental understanding of the effects of patho-physiological conditions on organ function as they relate to veterinary medicine.

VM150 [VETM2150]

**VETERINARY PHARMACOLOGY/
THERAPEUTICS**

60 hrs

The pharmacologic characteristics of drug-groups are stressed. Students become familiar with the general pharmacology of drugs, acting on the following: the CNS, the autonomic and somatic nervous systems, cardiovascular system, fluid and electrolyte balance, respiratory system, digestive system, locally on skin mucosa, eyes and ears. The chemotherapy of microbial, fungal and viral diseases and also neoplastic diseases are emphasised.

VM160 [VETM2160]

**VETERINARY
GENERAL PATHOLOGY**

60 hrs

The course deals with basic principles of cell and tissue reactions to injury, abnormal processes in animals, recognition, interpretation, and significance of lesions of disease and deviations from normal in tissues and tissue fluids. Identification of common lesions in organs and tissues both macroscopically and microscopically. Practical sessions are designed to emphasise the interpretation of gross structural changes in relation to microscopic structural changes, functional disturbances, pathogenesis and causes.

VM170 [VETM2170]

GENERAL MICROBIOLOGY

45hrs

The course exposes students to general principles in bacteriology, mycology, virology and immunology with emphasis on terminologies, structures and functions, classification, sterilisation, chemotherapy, host-parasite relationships and immunological responses as well as growth and genetics.

VM180 [VETM2180]

VETERINARY PARASITOLOGY I

70 hrs

This unit covers the helminths and deals with the basic epidemiology of these infections, their biology, transmission and techniques for their identification, properties of their life cycles and principles of prevention, treatment and control on an individual animal, farm and on national and regional bases.

PROBLEM BASED LEARNING

162 hrs

Courses in this year are grouped into blocks and problems of clinical import are designed to help students learn by themselves under the guidance of a tutor. The students brainstorm the problems, discuss issues, formulate hypotheses and come up with the objectives of such problems.

VM 390A [VETM2390]

RESEARCH METHODOLOGY

10 hrs

This course serves as a preparatory course for VM 390B (Year 1V) and covers the basic principles of research protocol and problems, scientific methods and experimentation, experimental error and improving experimental accuracy. The steps in experimentation, the use of statistics in research, determination of sample size, data collection and the writing up of research proposals and reports will be fully discussed. The course is not an examinable course. However, student attendance is required.

YEAR 3

VM201 [VETM3201]

AVIAN DISEASES

60 hrs

The etiology, pathogenesis, epidemiology, clinical signs, gross and microscopic pathology and treatment of poultry (and other pet and aviary species) diseases will be covered. Lectures will also cover how to examine birds, reach a diagnosis and recommend treatment, and how to institute preventive and control measures in poultry farms. Emphasis on health maintenance will be stressed.

VM202 [VETM3202]

**DISEASES OF
NON-DOMESTIC ANIMALS 40 hrs**

Study of biology, management and diseases of laboratory animals, wildlife with emphasis on local fauna, fish and marine mammals. Rational approaches to handling, disease prevention, diagnosis and treatment will be discussed. Importance of aquaculture in the national economy will be emphasised.

VM240B [VETM3340]

**PRINCIPLES OF SURGERY/
VM 240A MEDICINE I 90 hrs**

Lectures on surgical instruments, sutures materials and patterns and pre-surgical management of small and large animals. There will be discussions on system-by-system approach to techniques of clinical diagnosis of diseases of domestic animals.

VM250 [VETM3250]

VETERINARY TOXICOLOGY 70 hours

Students will learn the basic principles of toxicology and the molecular mechanisms of toxicity. The programme aims at producing a graduate who will have developed competence in the art of diagnosis and science of treatment in cases of poisoning involving drugs, noxious industrial chemicals, household and agricultural products, and poisons of plant and animal origin.

VM260 [VETM3260]

**VETERINARY SYSTEMIC
PATHOLOGY I 25 hrs**

Study of etiology, pathogenesis, gross, microscopic and diagnosis of lesions of diseases of the organ systems in the body. The laboratories are aimed at correlating morphological/functional processes with the lectures and to drill students in interpretation of gross and microscopic lesions.

VM270 [VETM3270]

BACTERIOLOGY/MYCOLOGY 60 hrs

Study of pathogenic bacteria and fungi of veterinary importance. Consideration will be given to their morphology; growth, virulence factors, pathogenesis of associated diseases as well as laboratory diagnosis, treatment, epidemiology, control and public health importance. The lectures are supplemented with the appropriate laboratory practicals.

VM271 [VETM3271]

VETERINARY VIROLOGY 40 hrs

General characteristics of viruses. Taxonomic criteria, cultivation, replication and assay of viruses. Families with genera that are important in Veterinary Medicine and pathogenesis of viral infections. Laboratory technology involved in *in-vitro* cultivation of viruses and laboratory diagnosis of viral diseases.

VM272 [VETM3272]

VETERINARY IMMUNOLOGY 40 hrs

Study of the basic requirements of immune systems; mechanisms of immune reactions; the role of immune responses; protective mechanisms against infectious agents, tumours and transplants; immunoprophylaxis; abnormalities in immune function; pathogenesis of immune-mediated diseases. Lab exercises include diagnosis of infection, immune-mediated diseases and defects in the immune system; sample collection; immunisation.

VM280 [VETM3280]

**VETERINARY
PARASITOLOGY II 60hrs**

This unit covers ectoparasites and protozoa and deals with the basic epidemiology of these infections, their biology, transmission and techniques for their identification, properties of their life cycles and principles of prevention, treatment and control on an individual animal, farm and on national and regional bases.

**VM301 [VETM3301]
VETERINARY PUBLIC
HEALTH AND ZONOSSES 30 hrs**

Veterinary Public Health in its application of professional veterinary skills, knowledge and resources for the protection, and improvement of human health. Emphasis on performance of animal-related, biomedical and generalist functions. Basic epidemiology, prevention and control of specific bacterial, viral, mycotic and parasitic zoonoses with emphasis on those significant in the West Indies. Emerging zoonoses to be highlighted.

**VM302 [VETM3302]
COMMUNITY &
ENVIRONMENT HEALTH 15 hrs**

The current concept, scope, goal, and priorities of public health and its contribution to human health and national development; and an introductory course on the basic environmental and ecological factors influencing the health and diseases of animals and man.

**VM303 [VETM3303]
VETERINARY EPIDEMIOLOGY AND
BIostatISTICS 60 hrs**

Emphasis on the basic principles of veterinary epidemiology comprising general concepts and application of epidemiology, the use of statistical methods in the analysis of data and the design of experimental studies concerning the health and disease of man and animals.

**VM360
VETERINARY
CLINICAL PATHOLOGY 60 hrs**

Haematology, cytology and chemistry of body fluids of domestic animals in health and disease, and the use of these changes in making diagnoses.

PROBLEM BASED LEARNING 162 hrs

YEAR 4

**VM300 [VETM4300]
LARGE ANIMAL MEDICINE 90 hrs**

Incidence, etiology, pathogenesis, clinical signs, diagnoses, treatment prevention and control of bacterial, viral, mycotic, parasitic, nutritional and metabolic diseases of large animals.

**VM310 [VETM4310]
SMALL ANIMAL MEDICINE 90 hrs**

The etiology, clinical signs, diagnosis, treatment, management control and public health significance of infectious diseases of dogs, cats and other pets.

**VM 321 [VETM4321]
FOOD SAFETY/HYGIENE 45 hrs**

Principles and practices of meat, fish and milk hygiene and emphasis on the sanitary production, processing, storage and distribution of meat, fish, milk and related products; quality control through proper and adequate inspection; and the study and surveillance of meat and milk-borne diseases.

**VM322 [VETM4322]
PREVENTIVE MEDICINE 15 hrs**

Planning, implementation and evaluation of herd health programmes, disease prevention, control and eradication measures with particular emphasis on those relevant to Trinidad & Tobago and the West Indies. General approaches to promotion of animal health and productivity.

**VM330 [VETM4330]
THERIOGENOLOGY 120 hrs**

Techniques for examination, therapeutic diagnosis and breeding soundness evaluation of the male and female genitalia, artificial insemination, embryo transfer, estrous synchronisation techniques and reproductive herd health programmes. The second part focuses on the disorders of estrous cycle, conception, pregnancy and pregnancy wastage, disturbances of libido, the mating act and failure to fertilise. Physiology of pregnancy, normal and abnormal parturition, management of obstetrical conditions and the care of the neonate.

VM340 [VETM4340]

SMALL ANIMAL SURGERY *75 hrs*

Various surgical conditions, techniques of repair and post-surgical management of canine, feline, and other pets.

VM341 [VETM4341]

LARGE ANIMAL SURGERY *70 hrs*

Different surgical conditions, techniques for correction and post-surgical management of bovine, ovine, caprine, porcine and equine. Emphasis on bovine and equine lameness, their etiology, clinical signs, management and prevention will be stressed.

VM344 [VETM4344]

ANAESTHESIOLOGY *60 hrs*

Types and effects of anaesthetic agents. General principles and practical applications of local and general anaesthesia in domestic and non-domestic animals will be discussed.

VM345 [VETM4345]

RADIOLOGY *60 hrs*

Theory and principles of the X-ray, X-ray machines, radiographic procedures and interpretations, film storage, handling, processing and radiation safety.

VM390B [VETM4390]

RESEARCH PROJECT *100 hrs*

The objective of this course is to provide the student with the basic skills and knowledge required in planning, executing, information retrieval and writing up a scientific investigation under the supervision of a member of the academic staff. The evaluation of this course is based on both oral and written presentation of the research project.

PROBLEM BASED LEARNING

YEAR 5

VM306 [VETM5306]

**STATE MEDICINE/
JURISPRUDENCE/ETHICS** *30 hrs*

The Laws of the Republic of Trinidad & Tobago and Regulations governing the organisation and administration of veterinary public health agencies. The importance of jurisprudence - the science of law - in veterinary education and need for awareness of these laws. The relevance of professional ethics in the practice of veterinary medicine.

VM391 [VETM5391]

Clinics I &

VM 392 [VETM5392]

CLINICS II *650 hrs*

Application of basic medical knowledge to the diagnosis, treatment, prevention and control of diseases and improvement of livestock production. This will involve rotation from one specialty to another. i.e., Food Animal and Theriogenology; Small and Companion Animal; Equine; Poultry and Avian; Laboratory; Public Health.

PROBLEM BASED LEARNING/

CLINICAL CONFERENCE *180 hrs*

Oral presentation of selected cases by the final year students each week. A student is expected to follow the case to be presented from the beginning to the end under the supervision and consultation of staff.

11. PHARMACY PROGRAMME

BACHELOR OF SCIENCE DEGREE IN PHARMACY (BSc PHARMACY)

Please note that the Pharmacy Programme curriculum is currently being reviewed, and information given is subject to change.

A. *Curriculum Objectives*

- i. To equip students pursuing pharmacy studies with the knowledge, competencies and skills for professional practice.
- ii. To train a cadre of pharmacy practitioners who would operate effectively as members of the healthcare team in primary prevention and treatment, in hospitals, industry and the community.
- iii. To produce graduates who will be propelled to continue self-learning in keeping with global trends and advancements in the field of Pharmacy.
- iv. To provide the quality of training that would lead graduates to graduate programmes in Pharmacy studies and related areas.

B. *Teaching Methods*

The hybrid system of teaching and learning instituted at Mount Hope emphasises Problem Based Learning (PBL) and requires students to adopt a philosophy of self-directed study. As such, students must be self-motivated to acquire their own learning. In addition to PBL, learning settings will also include lectures, laboratories, clerkships for pharmacy practice, outreach and research projects, and seminars. It will be most convenient for students on clerkships to obtain lectures and conduct discussions through distance teaching over the UWIDITE system in the Caribbean as well as in sub-centres in Trinidad & Tobago, if this is the system of monitoring or teaching selected by the Chairman of the Pharmacy Programme. Students will be required to undergo close supervision by preceptors from the Pharmacy Boards. The Pharmacy Boards/Councils will recommend for the University's approval those Pharmacies and agencies which are equipped to accommodate Outreach Projects, Pharmacy Practice Sessions and Clerkships. The Code of Ethics of Pharmacists in general and the various Boards and Associations of Pharmacy will be stressed throughout the training.

C. Course Descriptions

PM131 [PHAR1131] [PHAR1132]

PHARMACY STUDIES I

Orientation to the Pharmacy Profession

At the end of this foundation course, students will be able to relate the history of Pharmacy, role of the Pharmacist, role of Pharmacy Boards, and an overview of ethico-legal aspects of Pharmacy to the practice of the profession. Students will be able to discuss the role of Pharmacists as members of the healthcare team; to describe terms and concepts related to dispensing, to use medical terminology and clinical rotation, and perform pharmacy calculations related to the practice.

Pharmaceutics

Students will be able to discuss the physico-chemical properties of drugs and pharmaceuticals, product design, drug delivery, manufacturing, testing, stability, quality assurance, control and release. The dosage forms to be studied will include solutions, suspensions, semi-solids, suppositories and solid dosage forms.

Pharmacognosy

Students will be able to identify and distinguish natural products of plant and animal origin, allergenic and immunogenic products, and toxic plants. They will describe suitable methods for the production, standardisation, storage, quality control, and use of these substances.

PM231 [PHAR2231]

PHARMACY STUDIES II

Prerequisite: PM131

Pharmacology

This course deals with the understanding of mechanisms of drug action, pharmacological actions, indications, contraindications, adverse effects, and precautions for drugs belonging to each organ system. The students will be able to explain the pharmacological basis for drug use in majority disease profiles.

Toxicology

Students will be able to recall the basic principles of toxicology, and the molecular mechanisms in toxicity. Students will be able to relate the acute poisoning, toxicities of drugs, noxious industrial chemicals, household and agricultural products, drugs of abuse and environmental toxicology to relevant mechanisms.

Non-prescription Drugs, Use/Abuse

Students will be able to describe the physiological aspects of conditions, which benefit from over the counter (OTC) medicines, and demonstrate the role of the pharmacist in advising the patient on the correct use of non-prescription drugs.

PM331 [PHAR3331]

PHARMACY STUDIES III

Prerequisite: PM231

Radio-pharmacy and Laboratory Instrumentation

Students will be able to discuss treatments and therapies associated with radio-pharmaceutical compounds. Safety measures associated with manufacture, purification, control, dispensing, laboratory design and dose calculation will be included.

Legal Aspects of Pharmacy/Health

Prerequisite: PM241

Students will demonstrate communication skills in the use of legal writing and terminology. They will be able to relate a number of Acts and Regulations to the ethico-legal practice of Pharmacy from W.H.O. and a number of Pharmacy Associations, Boards and Councils. Students in Trinidad & Tobago will pay special attention to the Food and Drugs Regulations, The Pharmacy Board Act, The Antibiotic Ordinance, The Dangerous Drugs Act, The Narcotic Ordinance, the conditions for registration and removal of Pharmacist and the Code of Ethics adopted by the Pharmacy Board.

Drug Therapeutics

Prerequisite: PM104, PM204

The course is designed to provide the student with information on the clinical use of drugs. This will include the knowledge of disease processes including pathophysiology, clinical signs and symptoms, lab diagnosis and medical management of selected disease states. Considerations and precautions will be taken in the selection and dosing of medications most frequently used in common disease states. The knowledge of clinically significant side effects and toxic effects will be included in the disease states.

Pathophysiology

Prerequisite: PM104, PM204

Emphasis on the human organ systems with focus on cellular, organ and systematic change associated with the human disease process. Included are the physiological responses of the body organ's systems to disease process and the contribution of these responses to the production of signs and symptoms that are normally associated with each disease state; thus emphasising the etiology, pathogenesis and pathophysiology of diseases of the human organs systems.

PM351 [PHAR4351] PHARMACY STUDIES IV

Prerequisite: PM331

Pharmacokinetics

Students will be able to present the factors that influence the *in vivo* disposition of drugs, absorption, distribution, metabolism and excretion.

PM353 [PHAR4353] PHARMACY STUDIES IV RESEARCH PROJECT

Research Studies

A research project with a departmental discipline. Students, under direction of one or more faculty members, will investigate and research a problem of limited scope. It should require literature research related to the project, collection of data, write up of the research project and presentation. Students will have the opportunity to become familiar with historical developments, impacts, and significance of developments in the field of pharmacy.

Contemporary Issues in Pharmacy

Students will be able to present seminars and research findings on Contemporary Issues in Pharmacy with a relation to the local/regional services.

PM110 [PHAR1110] PHARMACY SCIENCES I

Pharmaceutical Chemistry

Students will be able to illustrate, describe and classify natural and synthetic organic medicinal and pharmaceutical compounds such as bioactive molecules, enzymes, amino acids, carbohydrates and lipids. Students will be involved in laboratory sessions identifying simple organicals.

PM 211 [PHAR2211] PHARMACY SCIENCES II

Applied Biochemistry

Lectures in this course outline the structure, function, synthesis and breakdown of bio-molecules. Students will demonstrate an understanding of molecular genetics, including inborn errors of metabolism, recombinant DNA technology and gene therapy.

Medicinal Chemistry

(Prerequisite: PM110)

Students will be able to illustrate, describe and classify natural and synthetic organic medicinal and pharmaceutical compounds according to structure, physico-chemical and chemical properties, and the basic principles of pharmaceutical analysis. Students will also be able to discuss drug action at the molecular level involving biopolymers such as enzymes, nucleic acids and cellular membranes. Students will appraise pharmaceutical aspects of drugs, such as chemical stability and interactions with other pharmaceutical agents in various dosage forms.

Instrumental Methods in Pharmaceutical Science

Students will be able to apply and illustrate the use of instrumentation techniques on the preparation of assays, and the analysis and identification of natural and synthetic medicinal products.

PM32A [PHAR3032] COMMUNITY HEALTH

Occupational Health with Industry Outreach

Students will appraise the occupational hazards associated with selected workplaces, and review the safety rules, and therapeutics associated with a number of occupations. Students will be able to discuss ergonomics, health and safety practices in the drug/cosmetic/industries and after site visits.

Basic Counselling Skills

(Prerequisite: CM10A, CM10B)

Students will be able to practise and apply basic counselling techniques in skills laboratory sessions with their peers through role-play and with simulated and real patients seeking pharmaceutical care. They will be able to practise these skills having been provided with information on the counselling process, behaviour in groups, and the ethics of counselling. Students will also appraise modalities of counselling that have been found to be effective in dealing with adherence (compliance), convalescence, rehabilitation, sexuality, family planning, AIDS, substance abuse, bereavement, and pharmaceutical care.

Alternative (Complementary) Medicines

Students will be able to critically discuss and analyse the use and efficacy of several existing alternatives to medicine after relating to persons who conduct those practices: acupuncture, exercise programmes, folk and traditional medicines, spiritual healing, magnetic therapy, etc.

Research Methods and Biostatistics

In this course, students are introduced to basic tools required to conduct scientific investigations of high standards in the pharmacy field, and are also exposed to basic concepts and terms in Research Methods and Biostatistics, which enable them to successfully review scientific literature in pharmacy and related fields.

MS27M [PHAR3027] SOCIAL SCIENCES

Introduction to Management

Students will be able to appraise the principles and process of management from local and global perspectives with due concern for ethical and environmental issues. They will be able to assess management methods including planning, organising and forecasting.

Principles of Marketing

Students will adopt the marketing manager's perspectives in the analysis and decision-making of planning, pricing and distributing products to the consumers. Students will be able to conduct market research with consideration for ethical and social issues in the marketing of pharmacy.

Introduction to Accounting

Students will be able to demonstrate an understanding of the principles and concepts involved in the preparation of financial statements from a theoretical as well as a practical base.

Business Law

Students will be aware of the role and function of law in society, as a means of control and as a mechanism for the adjudication of rights. Students will also be able to apply the general principles of contract, conditions and warranties, offer, acceptance, misrepresentation, agreement and other features of business law with direct impact in pharmacy.

PM 241 [PHAR2241] PHARMACY PRACTICE I

Students will be able to relate the organisation of health care delivery to primary health care and appraise the issues impacting on health care reform. Students will apply and demonstrate the knowledge obtained in classroom and laboratory aspects of the entire programme through outreach, projects and coursework, to the practices of Pharmacy in hospitals, pharmacies and industry, and patient care through the practice of pharmaceutical care.

Pharmaceutical Dosage Forms/Biopharmaceutics (Prerequisite: Successful completion of Year One courses)

Principles of pharmaceutical dosage forms are further developed with emphasis on Biopharmaceutical considerations in dosage form design. Principles of bioavailability and bio equivalence are dealt with in detail. Special drug delivery systems for transdermal applications, intransal and parenteral routes of administration are also considered.

PM341 [PHAR3341] PHARMACY PRACTICE II

Pharmacy Practice-Pharmacotherapy Lab/Quality Assurance & Seminars in Quality Administration/Introduction to Clinical Clerkship

(Prerequisite - Successful completion of Year Two courses)

Problem based, self directed laboratory exercises to develop the students' skills in clinical pharmacy practice relating to patient care by way of prescription screening, dispensing, counselling, patient profiles, and drug monitoring.

Students will be introduced to Clinical Pharmacy via Clinical Clerkship and the Health Care team in the institution. They will commence the application of communication skills, professional laws, ethics, counselling, drug therapy monitoring, drug information research, patient interviewing, and judgement to the provision of pharmaceutical care and to the pharmacist's clinical role in the health care delivery systems. They will develop a systematic approach to patient pharmacotherapy monitoring through ward rounds, working in clinics/wards and reviewing/presenting clinical case studies.

PHYSICAL ASSESSMENT

- Clinical Skills

Basic assessment techniques necessary to determine patients' response to drug therapy. Techniques for giving immediate and temporary care to those who are ill or injured. All pharmacy students must have a First Aid/CPR course before registering with the local Pharmacy Board.

PM 361 [PHAR4361] PHARMACY PRACTICE III

Pharmacy Practice (PP) Lab/PP Topics/Community & Institutional Clerkship

(Prerequisite - Successful completion of Third Year and PM300)

Clinical Community Clerkship. Students should understand the role of self-medication on health care and be able to demonstrate non-prescription drug product information effectively.

The students will be expected to demonstrate professional competencies in the provision of pharmaceutical care for patients. Activities will include pharmacotherapy monitoring, via patient care plans, case studies, patient counselling, patient interviewing, provision of drug information, substance abuse, home health care, application of computer concepts to the practice of pharmacy, public education, public health visits, advanced clinical institutional clerkship, clinical pharmacokinetics, I.V. Admixture/T.P.N., safe handling/mixing of cytotoxic agents, etc and contributing to patient care as part of an interdisciplinary team.

PM300 [PHAR3300] SUMMER CLERKSHIP

(Prerequisite: Successful completion of Year Three courses)

Further enhancement of PM340 Clinical Clerkship with an emphasis on drug distribution systems and pharmacy department administration in hospitals.

PM310 [PHAR4310] EXTENDED CLERKSHIP

(Prerequisite: Successful completion of Year 4)

Further enhancement of PM361.

PHARMACY PROGRAMME

Prerequisite table

Course	Pre-requisite	Course	Pre-requisite	Course	Pre-requisite
PM 231	PM 131	PM 32A		PM 351	PM331
PM 211	PM 110		CM 10A	PM 361	PM 331 PM 341 MS 27M PM 300 PM 32A
			PM 241	PM 331	PM 231
			PM 104 PM 204		
PM 241	PM 131			PM 341	PM 204
PM 211			PM 211		
PM 231			PM 231		
PM 241			PM 241		

12. GENERAL INFORMATION

PROTOCOL FOR THE HANDLING OF STUDENT REQUESTS

Purpose

To foster exchange of ideas between staff and students.

To coordinate:

- *All aspects of the undergraduate student affairs from the School's Phase and Curriculum Committees.*
- *General Information matters from the Student Affairs Committee for Faculty Board approval.*

Functions

To identify and bring to the attention of the Faculty of Medical Sciences, matters relating to students' welfare and academic development.

To liaise with:

- *Medical Education and Learning Resource Committee.*
- *Deputy Deans of the Faculty and Directors of Schools.*

To consider:

- *Students' requests for protracted leave of absence.*
- *Recommendations from Heads of Units/Department ,concerning students' performance, attitude and behaviour.*

Presentation of Requests

- *The Undergraduate Student Affairs Committee will deal with student matters that could not be resolved after discussion with Heads of Departments or Directors of Schools.*
- *All requests should be made in writing through the Heads of Departments or Directors of Schools. Relevant details, key person(s) involved or who need to be contacted should be stated.*
- *If an academic or personal matter involves an individual, the student should present the case as above.*
- *If an academic matter involves a group of students or a whole class, a written statement should be sent through the Class (or assistant) representative.*
- *If a personal matter involves a group of students, a written statement signed by all those involved should be presented.*

- *If a request for protracted leave of absence, the reason(s) and required duration should be stated including supporting documents (where applicable) through the Head of Department and/or Dean's Office.*

Mechanism for Dealing with Requests

- *Copies of correspondence pertaining to requests will be circulated to all members as soon as they are received by the chairman (or co-chairman).*
- *The Chairman (or co-chairman) will write (or contact by telephone or facsimile if urgent) key persons involved (tutors, physicians, etc.) requesting their views in writing.*
- *A meeting will be convened at the earliest opportunity to discuss the matter.*
- *Student(s) may be interviewed by some or all members of the committee if required.*
- *The Dean's Office will communicate the outcome to the respective student(s).*

DRESS CODE AND CONDUCT

Students are reminded that they should at all times conduct and present themselves in a manner in keeping with the nature of the profession for which they are in training, and as directed by the School in which they are registered.

SMOKE-FREE POLICY

Academic Board, at its meeting on April 08, 1997 recommended the following:

1. *that all buildings on Campus should be smoke-free.*
2. *that members of the Committee would try to meet with Hall Chairpersons, Wardens and the Housekeepers to obtain their views on the designation of smoke-free rooms in Halls of Residence.*
3. *that the University, as the premier Educational Institute in this country, has a responsibility to educate the Campus community about the dangers of smoking through:*
 - a) *Signs on Notice Boards;*
 - b) *Articles in the Campus Newsletter;*
 - c) *Information leaflets in the packets given to new students entering the University.*

IMMUNISATION AGAINST HEPATITIS & RABIES

It is expected that all prospective students entering the Faculty of Medical Sciences will be inoculated against Hepatitis & Rabies prior to admission.

EATING IN CLASSROOMS

Food and drink may not be brought into the classrooms or be consumed there. Students should also refrain from chewing gum.

MEDICAL SCIENCES LIBRARY

RULES FOR LIBRARY USERS

1. HOURS

SEMESTER

Mondays to Thursdays	8:30 a.m - 10:00 p.m.
Fridays	8:30 a.m. 8.00 p.m.
Saturdays	8.30 am - 5.00 pm

VACATION PERIODS

Mondays to Fridays	8:30 a.m. - 5:00 p.m.
Saturdays	8:30 a.m. - 12:30 p.m.

Vacation hours will apply to the first week of each academic year.

MEMBERSHIP

The University of the West Indies

- The Library is open to registered graduate and undergraduate students and staff of all campuses of The University of the West Indies.

Non-University of the West Indies

- Visiting research workers, faculty and students of other universities and tertiary level institutions may be granted reading and reference privileges on recommendation of a faculty member and at the discretion of the Librarian.*
 - Other non-university persons over the age of 16 may be granted reading and reference privileges. This is, however, subject to a review by the Librarian on duty and is dependent on the specific need of the particular person.
 - A fee may be charged for long periods of use or repeated use as outlined in Information Bulletin No. 9 (Rev.).

LOANS

General

4. No book, periodical or other library material may be removed from the Library unless it has been legitimately charged out at the Loans Desk and the date label stamped by the member of staff on duty. A user is responsible for any book or other item borrowed in his/her name. This responsibility ends only when the loan is officially cancelled. Failure to comply with this rule will be treated as a major and deliberate offence.
5. Users' identification cards are not transferable. It is a major offence to lend or borrow identification cards. Persons contravening this rule may have their library privileges withdrawn or may be referred to the Principal for further action.
6. Certain publications may not be removed from the Library. These include reference books, items in Special Collections, works of special value and other designated Not for Loan Items. All such material will be clearly marked.
7. Loans may extend for varying periods depending on the extent of demand for each item. All material loaned will be subject to recall by the Librarian at any time. No loans may be renewed for more than seven (7) days.

In cases where a book issued on loan is requested by another user it may be recalled after it has been on loan for a minimum of seven (7) days. A new date due is assigned and fines are charged for non-return of the item after the new date.

Undergraduates

8. Undergraduate students of the Faculty of Medical Sciences may have on loan up to eight (8) books at a time. They may not borrow serials.

Graduates

9. Graduate students of the University may have on loan up to twelve (12) items (including serials).

Graduate Research Assistants/Teaching Assistants (non Graduate students)

10. Research assistants may have on loan up to twelve (12) items (including serials).

Academic Senior Administrative and Professional Staff

11. Academic Senior Administrative and Professional Staff of the Faculty of Medical Sciences including part-time and Honorary Lecturers may have on loan up to seventeen (17) items including serials.

In case of special need, additional items may be loaned at the discretion of the Librarian. All loans are subject to recall by the Librarian at any time.

Other persons

12. **Other persons permitted to borrow library material may not borrow serials and may borrow books in accordance with the Patron Category assigned.**

Departments

13. Library materials may be loaned for extended periods to Departments of the University under certain conditions and at the discretion of the Librarian.

Reserve books

14. All persons to whom the Library is open under Rule 2 may borrow, in addition to the books permitted above, two (2) books reserved for overnight use only. At the discretion of the Librarian, use may be restricted to In Library only. These may be borrowed before the specified times posted at the loans desk and must be returned by half an hour after opening time on the next working day.

Serials

15. Periodicals and other serials (excluding certain titles and newspapers, which are not for loan) may be issued on loan for a period of seven (7) days to graduate students and to members of the academic and research staff only. These loans shall NOT be renewable. The most recently received issue of a periodical may not be borrowed except at the discretion of the Librarian.

Overdues

16. The Librarian is empowered to levy a fine upon all users who fail to return library material within the prescribed period. The fine for late return of items is one dollar (\$1.00) for each day the loan is overdue. This fine will apply to normal loans and items recalled to satisfy other borrowers' requests. The fine for late return of items in the Reserve Collection will be one dollar (\$1.00) per hour or any part thereof, per item. The maximum for each overdue item in all categories is five hundred (\$500.00) dollars, after which further disciplinary action may be taken.
 17. After a third overdue notice is dispatched, all borrowing privileges will be automatically suspended. Items which are not returned after due notice will be presumed lost and treated accordingly.
 18. When, after due notice, a fine or replacement cost has not been paid, the Librarian is authorised to request the Bursar to arrange for the amount of the fine/replacement cost to be recovered by the University.
 19. The names of all those students who are not in good standing with the Library, i.e., those who after due notice, have failed to return overdue publications or to pay for items lost or other outstanding fines, will be submitted to the Principal once per year for further action.
 20. The Librarian shall have power to remit or reduce fines in any case at his/her discretion.
 21. All users are required to return promptly to the Library all items on loan on completion of his/her period of study or termination of employment.
- (b) All library users must be prepared to present the appropriate identification cards entitling them to use the Library and/or its special collections at any time when asked to do so by a member of the Library or Security staff.
 - (c) Silence shall be observed in the Library.
 - (d) No bags, briefcases, handbags, parcels or other receptacles exceeding 15 inches (10" x 6" x 4") or 30 cm (20cm x 15 cm x 10 cm) may be brought inside the Library. [See attached specimen]. (Such bags, briefcases, handbags etc. may be left in the lockers (rental) provided in the Amphitheatre area. The University accepts no responsibility for the loss or damage of any articles so left.
 - (e) Laptop computers on battery power may be used in the Library.
 - (f) Pagers must be used with discretion and cellular phones may only be used as designated.
 - (g) Chairs and tables and other library equipment, fittings and furniture may not be marked, defaced or disarranged. Users may not place their feet on chairs or tables.
 - (h) Food or drink may not be brought into the Library's service areas or there consumed.
 - (i) The Library has been designated a smoke-free area and smoking is strictly forbidden.
 - (j) Books, periodicals, etc., taken from shelves and used in the Library should be left on the tables after use and NOT replaced on the shelves.
 - (k) All users leaving the Library must show all books, folders, periodicals, papers, etc., in their possession whether these belong to the University or not. Users may also be required to open for inspection any receptacle carried out of the Library.
 - (l) All members of the Library and security staff are empowered to require users to comply with these rules.

Conduct

22. (a) The Library is provided exclusively for the purpose of academic study and research. Any conduct inconsistent with this purpose or detrimental to its pursuit by others shall constitute a breach of these rules.

(m) The Librarian shall at all times have authority to maintain good order in the Library and may exclude from it or suspend from its use any user who breaks these rules. The Librarian may report to the appropriate University authority any person responsible for serious or persistent breach of these rules. Such conduct by any member of the University community shall be considered a breach of University discipline.

25. Any breach of these rules by a user may render him/her liable to a fine not exceeding five hundred dollars (TT\$500.00) at the discretion of the Librarian.

26. The Librarian may institute such operating rules and procedures in addition to the above as may be deemed necessary and appropriate for good library economy and service.

***NB: (a) "Librarian" means the Campus Librarian or anyone delegated by her/him.**

Theft, Mutilation and Loss

23. Loss or damage to library material on loan to a user should be reported immediately. The user must pay the cost of replacing a lost or seriously damaged book or other item, in addition to any fine which may have been incurred prior to reporting the loss or damage.

(b) Major offences are specified in "The Charter of Principles and Responsibilities".

Replacement costs will include library processing costs up to fifty dollars (\$50.00) per item. Where damage to library material is reported, the user may be subject to a fine appropriate to the extent of the damage. When such damage is not reported but discovered this may be treated as a major offence.

24. The following will be considered a major offence against the University:

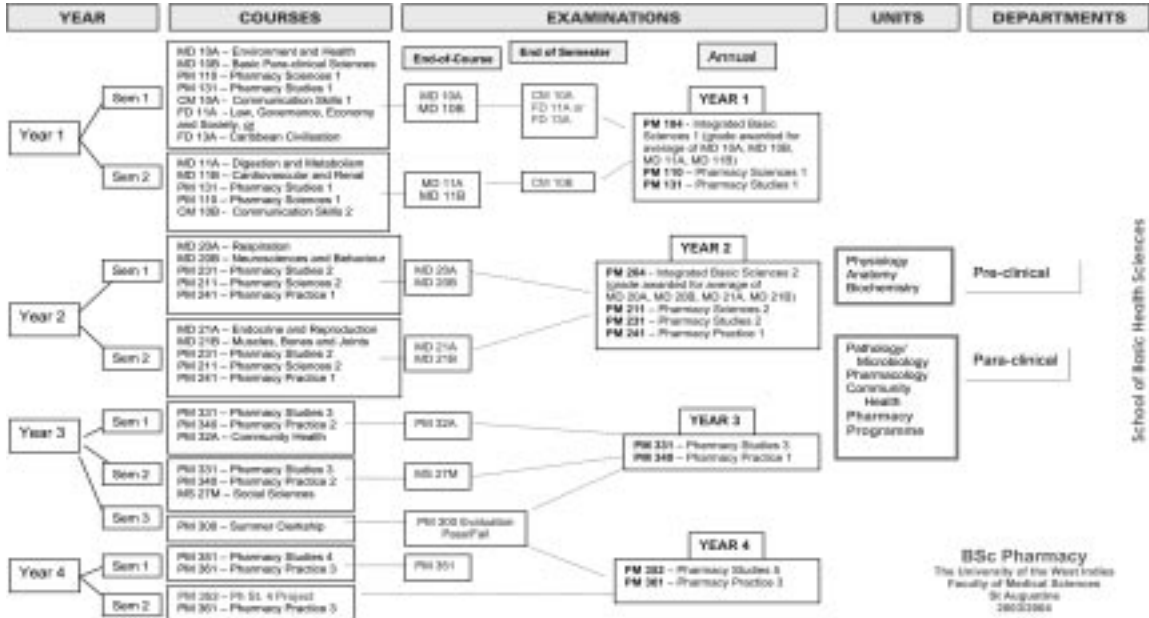
- (i) *the illegal removal of library materials,*
- (ii) *any attempt to obtain library materials or to gain access to library facilities by false pretences or forgery,*
- (iii) *the intentional misplacement of books in the Library,*
- (iv) *the wilful mutilation or defacement of library material.*

Any University person who commits such offences may be reported to the appropriate University authority for disciplinary action, which may include suspension or expulsion.

Non-University persons who commit such offences may be subject to legal action.

Medical Sciences Library
The University of the West Indies
Eric Williams Medical Sciences Complex
Champs Fleurs, Republic of Trinidad & Tobago
Tel: 1-868-645-2640 Ext.5206
Fax: 1-868-662-1392
E-mail: medlib2@trinidad.net
Web page: <http://www.mainlib.uwi.tt/msl>

FACULTY BOOKLET 2004 - 2005
The Faculty of Medical Sciences



School of Basic Health Sciences

BSc Pharmacy
 The University of the West Indies
 Faculty of Medical Sciences
 St Augustine
 TRINIDAD

FACULTY BOOKLET 2004 - 2005
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YEAR	COURSES	EXAMINATIONS	UNITS	DEPARTMENTS		
Year 1	Sem 1 MD 10B – Basic Para-clinical Sciences MD 280 – Skills Training CM 10A – Communication Skills DD 101 – Oral Biology FD 11A – Caribbean Civilisation (Sem 1 only) OR FD 13A – Law, Governance, Economy & Society	End-of-Course MD 10A MD 10B	Semester CM 10A FD 11A, <i>or</i> FD 13A	Annual Phase 1A MD 10A, MD 10B MD11A, MD 11B	Physiology Anatomy Biochemistry Pharmacology Pathology/ Microbiology Community Health Restorative Dentistry Child Dental Health Oral Diseases	Pre-clinical Para-clinical
	Sem 2 MD 11A – Digestion and Metabolism MD 11B – Cardiovascular and Renal MD 280 – Skills Training CM 10B – Communication Skills DD 101 – Oral Biology	MD 11A MD 11B				
Year 2	Sem 1 MD 20A – Respiration MD 20B – Neurosciences and Behaviour	MD 20A MD 20B	Phase 1B (Dental) MD 20A, MD 20B DD 101, DD 102, DD 103, DD 104	Restorative Dentistry Child Dental Health Oral Diseases	Clinical Dental Sciences	
	Sem 2 DD 100 – Head and Neck Anatomy DD 101 – Oral Biology DD 102 – Dental Materials Science DD 103 – Operative Dental Techniques (including Paediatric Dentistry and Prosthodontics) DD 205 – Core Radiology DD 206 – Dental Local Anaesthesia & Tooth Removal					
Year 3	Sem 1 & 2 DD 200/DD 201 – Dental Public Health & Preventive Dentistry DD 202 – Periodontology I DD 203 – Conservative Dentistry I DD 205 – Oral Radiology DD 207 – Prosthodontics I DD 208 – Orthodontics I DD 209 – Paediatric Dentistry I DD 210/DD 211 – Human Disease (General Medicine & General Surgery)		Phase II Part 1 DD 210/DD 211	Restorative Dentistry Child Dental Health Oral Diseases	Clinical Dental Science	
Year 4	Sem 1 & 2 DD 200/DD 201 – Dental Public Health & Preventive Dentistry DD 204 – Oral Pathology (incl. Oral Microbiology) DD 205 – Oral Radiology (incl. Dental Therapeutics) DD 300 – Oral Medicine DD 301 – Oral & Maxillofacial Surgery DD 302 – Periodontology II DD 303 – Prosthodontics II DD 304 – Conservative Dentistry II DD 305 – Orthodontics II DD 306 – Paediatric Dentistry II		Phase II Final DD 320, DD 330, DD 340			
Year 5 Only	DD 307 – Ethics, Law & Jurisprudence (Sem 1) General Anaesthesia	DD 307				

School of Basic Health Sciences & Dentistry

School of Dentistry

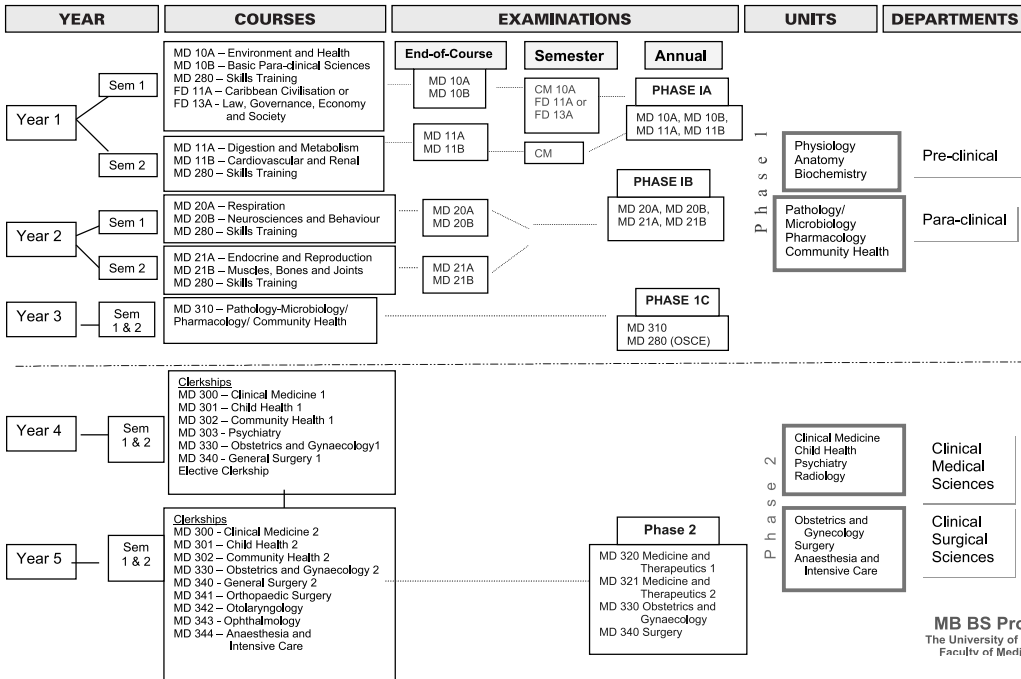
DDS Programme
The University of the West Indies
Faculty of Medical Sciences
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2003/2004

FACULTY BOOKLET 2004 - 2005
The Faculty of Medical Sciences

YEAR	COURSES	EXAMINATIONS	UNITS	DEPARTMENTS	
Year 1	Sem. 1 MD 10B – Basic Para-clinical Sciences CM 10A – Communication Skills 1 Clinical Skills Training FD 11A – Caribbean Civilisation (Sem 1 only) <u>or</u> FD 13A – Law, Governance, Econ and Society	End-of-Course MD 10A MD 10B	Semester CM 10A FD 11A or FD 13A	Annual PHASE IA MD 10A, MD 10B, VM 11A, VM 11B	PRE-CLINICAL
	Sem. 2 VM 11A – Digestion and Metabolism VM 11B – Cardiovascular and Renal VM 105 – Biostatistics & Computer Science CM 10B – Communication Skills 1 Clinical Skills Training	VM 11A VM 11B	CM 10B		
Year 2	Sem. 1 VM 101 – Veterinary Anatomy II VM11C – Animal Production I VM11D – Animal Production II		PHASE IB VM 101, VM 111, VM 112 VM 120, VM 150, VM 160, VM 170	VETERINARY CLINICAL SCIENCES	
	Sem. 2 VM 120 – Veterinary Physiology/Biochemistry VM 150 – Veterinary Pharmacology/ Therapeutics VM 160 – Veterinary General Pathology VM 170 – General Microbiology VM 180 – Veterinary Parasitology I Clinical Skills				
Year 3	Sem. 1 VM 201 – Avian Diseases VM 202 – Diseases of Non Domestic Animals VM 250 – Veterinary Toxicology		PHASE II A VM 201, VM 202, VM 250 VM 260, VM 270-272, VM 280 VM 360, VM 301/303	PARA-CLINICAL	
	Sem. 2 VM 260 – Veterinary Systemic Pathology VM 270 – Microbiology VM 271 – Virology VM 272 – Immunology VM 280 – Parasitology II VM 301-303 – Public Health I VM 240A – Introduction to Medicine VM 240B – Principles of Surgery VM 360 – Veterinary Clinical Pathology Clinical Skills			VETERINARY CLINICAL SCIENCES	
Year 4	Sem. 1 VM 300 – Veterinary Medicine II VM 310 – Veterinary Medicine I VM 330 – Theriogenology		PHASE II B VM 300, VM 310, VM 330 VM 340/344, VM 341/345 VM 321-322, VM 390	PARA-CLINICAL	
	Sem. 2 VM 340/344 – Veterinary Surgery I VM 341/345 – Veterinary Surgery II VM 321-322 – Public Health II VM 390 – Research Project			VETERINARY CLINICAL SCIENCES	
Year 5	Sem. 1 VM 306 – State Medicine/Jurisprudence/Ethics VM 391 – Clinics I Rotation/Clerkships ! Small/Exotic Animals ! Poultry/Avian ! Laboratory		PHASE III VM 306, VM 391, VM 392		
	Sem. 2 VM 392 – Clinics II Rotation/Clerkships				

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School of Basic Health Sciences

School of Medicine

MB BS Programme
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 Faculty of Medical Sciences

