KADUNA STATE UNIVERSITY

DEPARTMENT OF PHYSIOTHERAPY

UNDERGRADUATE STUDENTS' HANDBOOK

MARCH 2023 (1ST EDITION)

Please note the following:

I. The matters covered by this publication are subject to change from time to time, and guarantee cannot be given that changes will not be made after a candidate has been offered admission into the University. Students should enquire as to the update position on the contents of this handbook.

II. Admittance to the University is subject to the requirements that the student will comply with the university's registration procedure and will duly observe the statutes, ordinances and regulations of the university.

DEPARTMENT OF PHYSIOTHERAPY

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UNDERGRADUATE
STUDENT HANDBOOK

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MESSAGE FROM THE HEAD OF DEPARTMENT

You are welcome to the Department of Physiotherapy, Faculty of Allied Health Sciences, College of Medicine. Please, consider it a privilege to be accepted into the Department and as a new member, I anticipate that you will blend with other students and staff smoothly very soon.

Academic environment have its unique features and there are rules and regulations that guides all members of the University community. Some of these rules and regulations are contained in this handbook and you are expected to be familiar with them.

The handbook is a student guide and should be kept close to you as you may need to make reference to it from time to time in the course of your stay in the University. Your lecturers and staff are here to support you in order to make your stay in the University a memorable, meaningful and productive one.

I want to emphasize that the university is a place to learn and to develop yourself. Please make good use of all available opportunities. Importantly, you must take your studies serious, as you can only be the best you can be if you put in the efforts.

You are welcome.

HOD, Physiotherapy

GENERAL INFORMATION

VISITOR AND PRINCIPAL OFFICERS OF THE UNIVERSITY

VISITOR
His Excellency,
Mallam (Senator) Uba Sani
Executive Governor of Kaduna State

CHANCELLOR
HRH Mallam Sanusi Lamido Sanusi

PRO-CHANCELLOR
Mallam Hussaini Dikko

VICE –CHANCELLOR
Professor Abdullahi Ibrahim Musa

REGISTRAR
Barr. Samira Umar Balarabe

BURSAR
Hajia Hauwa'u Dalhat

LIBRARIAN
Dr. Umar Babangida Dangani

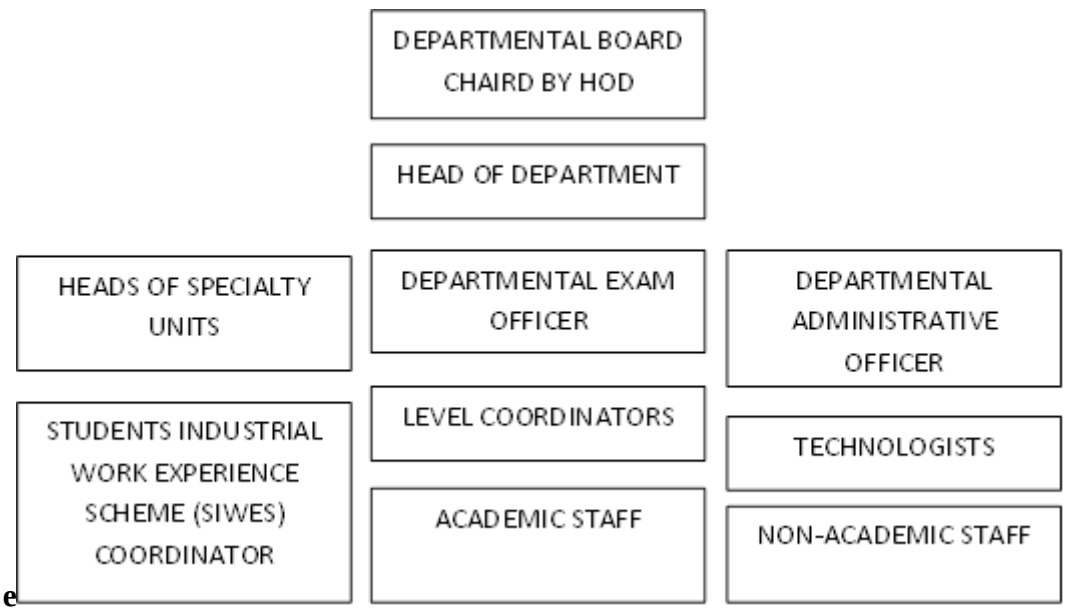
MEMBERS OF THE GOVERNING COUNCIL

Mallam Hussaini Dikko	**Pro-Chancellor & Chairman**
Professor Abdullahi I. Musa (VC)	**Member**
Dr. Abdulkadir A. Mayere	**Member**
Dr. Sanusi A. Isma'il	**Member**
Hon. Habibu Sani	**Member**
Mrs. Charity U. Shekari	**Member**
Dr. Halliru Musa Soba (Perm. Sec. MOE)	**Ex-Officio Member**
Mallam Mahmoud A. Shuaibu (Perm. Sec. MOF)	**Ex-Officio Member**
Professor Sadiq G. Abdu (Rep. Senate)	**Member**
Professor Helen A. Andow (Rep. Senate)	**Member**
Mrs. Florence Suleiman (Rep. Congregation)	**Member**
Pst. Sarah Omakwu	**Member**
Mal. Lawal H. Ajo (Rep. NUC)	**Member**
Barr Samira Umar Balarabe (Registrar)	**Secretary**

DEPARTMENTAL STAFF LIST

S/NO.	NAME	RANK	NATURE OF APPOINTMENT
1.	Adamu Ahmad Rufa'i	Professor	Full time
2.	Rufai Yusuf Ahmad	Professor	Visiting
3.	Abubakar Tijjani Shehu	Lecturer I	Full time
4.	Edward Yohanna Bahago	Lecturer I	Full time
5.	Samira Ahmad Bashir	Assistant Lecturer	Full time

DEPARTMENTAL ORGANOGRAM



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LOCATION OF THE DEPARTMENT

Kaduna State University Main Campus, Tafawa Balewa Way, Kaduna

LEARNING RESOURCES

Resource Requirement for Teaching and Learning

Human resources; there shall be lecturers in each of the following specialty areas;

1. Cardiopulmonary Physiotherapy
2. Orthopaedic and Musculoskeletal Physiotherapy
3. Neurologic and Mental Health Physiotherapy
4. Physiotherapy in Women's Health
5. Geriatric Physiotherapy
6. Community and Primary Health Physiotherapy

7. Child Health (Paediatric) Physiotherapy
8. Sports and Recreational Physiotherapy
9. Ergonomics and Occupational Health Physiotherapy
10. Integumentary and Skin care Physiotherapy
11. Oncology and Palliative care Physiotherapy

There shall be designated clinical instructors who are Clinicians in the Teaching Hospital in various specialties of Physiotherapy.

Physical resources;

There shall be Classes, Lecture halls and lecture theatres conducive for teaching and learning. In addition, the clinical aspect of the DPT programme shall take place in an accredited Teaching Hospital where the following facilities are available for clinical practice:

i) Department of Medicine with a Neurology Unit in addition to other units.
ii) Department of Surgery with an Orthopaedic Unit in addition to other units.
iii) Department of Paediatrics with a Paediatric Neurology Unit in addition to other units
iv) Department of Obstetrics and Gynaecology with an ante natal Unit in addition to other units.
v) Department of Physiotherapy with complementary facilities for effective training.

Library and Information;

There shall be a dedicated medical library with adequate provision of current books and journals periodicals and bibliographic indices on Physiotherapy. The library shall have modern information communication facilities for electronic access and retrieval of information.

Laboratories;

There shall be well equipped Kinesiology, Exercise therapy, Electrotherapy, Gymnasium and Simulation Laboratories.

BACKGROUND INFORMATION

PREFACE

The Department of Physiotherapy, Faculty of Allied Health sciences, Kaduna State University was established in 2019. National Universities Commission (NUC) resource verification was done in November 2019 and approval from NUC was given in 2020. The first set of students were admitted into the University for 2019/2020 Academic session. The regulatory Body visited the Department for Advisory visit in June/July, 2020. The Council required the Department to be well established in the Faculty and University at large by making some vital observations and recommendations. These report was forwarded to the appropriate Authority for immediate action.

Dr Rufai Yusuf Ahmad was appointed the first Head of Department of Physiotherapy. The HOD appointed Head of Units, level coordinators, exams and time table officers as well as the needed departmental committees inaugurated all for the transformation of the department into an accredited Unit of the Faculty of Allied Health Sciences.

This Handbook contents, applications and clarity of expression is devoid of ambiguity. It is detailed and more inclusive in terms of the rules and regulations on all matters of the Department. It is imperative that students should endeavour to regularly familiarize themselves with, seek counsel as appropriate, and be current on the various provisions guiding their operations, relationships, responsibilities, rights, privileges and expectations.

INTRODUCTION

Physiotherapy is a dynamic profession characterised by body of knowledge with established theoretical base and widespread clinical applications in Examination/Assessment, Treatment and Rehabilitation of Neuromusculoskeletal, Cardiovascular, Integumentary and Respiratory disorders, with the aim of preserving, developing and restoring physical function by natural methods. These natural methods are based essentially on movements, manual therapy and the use of physical agents. These three procedures: Exercise Therapy, Electrotherapy and Manual Therapy form the essential elements of Physiotherapy practice and it is therefore referred to as the Core of Physiotherapy practice.

The components of Physiotherapy are:

i. Preventive Physiotherapy

ii. Health Promotion Physiotherapy

iii. Diagnostic Physiotherapy

iv. Curative/Therapeutic Physiotherapy

v. Rehabilitative Physiotherapy

UNIVERSITY VISION

The vision of Kaduna State University is to become a University of world class standard with excellence in applied Sciences and sustainability studies.

MISSION OF THE UNIVERSITY

The Mission of the Kaduna State University is to provide all-round University education of the highest standard for the development of the individual and the State, while inculcating the spirit of love, tolerance, understanding and Unity in the State in particular and the Country in general.

PHILOSOPHY OF THE UNIVERSITY

The Kaduna State University shall promote excellence in knowledge acquisition through teaching, research and community service and to fully foster innovation and creativity by taking full advantage of globalization and knowledge based economy. It shall maintain the international character of a university and uphold the ideals of the community within which it is situated and at the same time promote unity in Kaduna State and the nation at large.

UNIVERSITY OBJECTIVES

The broad objective of Kaduna State University is to produce competent and qualified graduates with strong moral and academic standing. The specific objectives are:

i. To encourage the advancement of learning and to hold out to all persons without distinction of race, creed, sex or political conviction, the opportunity of acquiring a higher and liberal education.
ii. To provide courses of instruction and other facilities for the pursuit of learning in all its branches and to make those facilities available on proper terms to such persons as are equipped to benefit from them.
iii. To encourage and promote scholarship and conduct research in all fields of learning and human endeavour.
iv. To relate its activities to the social and economic needs of the people of the State and the Nation at large.
v. To undertake any other activities appropriate for a University of the highest standard.

PROGRAMME PHILOSOPHY

The Philosophy is to train and produce highly knowledgeable and skilled Physiotherapists who will continue to search for more knowledge and professional skill and apply the same for treatment, rehabilitation, prevention, health promotion and other health needs of the patients and the community using Physiotherapy modalities.

PROGRAMME AIMS/OBJECTIVES

The general objectives of the Physiotherapy programme is to train Physiotherapy Professionals equipped with adequate theoretical knowledge, clinical skills, sense of purpose and devotion to patient care.

The specific aims and objectives are to produce physiotherapists that will:

i) be able to work in Hospitals, Rehabilitation facilities and other Health Establishments as members of the Health Team, in Physiotherapy Training Institutions, Research Centres and other Academic environments after undergoing relevant postgraduate training; in Sports, Physical Fitness and Health promotion Facilities; and in Industrial workplace and other occupational environments.

ii) Evaluate physical ailments and disabilities, plan and carry out a programme of treatment according to the patient's clinical state.

iii) Recognize the role of the Physiotherapist in Health Care delivery in the community and in the Health Team.

iv) Participate in clinical research with others as a mean of further study and professional enhancement.

v) Acquire, develop and maintain rapport with professional colleagues, patients, their relatives and members of the Health Care Team.

vi) Acquire a sense of commitment to patients and the profession at all times.

vii) Acquire knowledge in health policies, health management, global health issues and socio-cultural heath issues.

ACADEMIC CONTENTS

Title of the Degree

The title of the degree is Doctor of Physiotherapy, to be denoted as DPT.

Mode of Study

Candidates must register as full-time students. No part-time registration is allowed.

Admission Requirements

The admission requirements into the programme is as contained under general issues for the Health Sciences disciplines. Candidates seeking admission into Doctor of Physiotherapy (DPT) programme must have passed the Secondary School Certificate Examination/West African Examination Council/ National Examination Council of Nigeria with Minimum of 5 credits in Biology, Chemistry, Physics, English Language and Mathematics in not more than two sittings.

a) **Unified Tertiary Matriculation Examination (UTME)**

i. The prospective Candidates for the DPT degree programme must satisfy the minimum entry requirements (appropriate cut - off points) of the Kaduna State University (KASU) in UTME in Biology, Chemistry and Physics.

ii. Candidates entering into 100 level from College of Basic and Remedial studies (CBRS) must also have a minimum of 3.00 GPA as well as sit for UTME.

b) Direct Entry Requirement for All Programmes (200 level)

i) Candidates must have a minimum of grade C pass at Advanced level in Biology, Chemistry and Physics together with 5 O/level passes at credit level.
ii) Diplomas in Physiotherapy (candidates with diplomas may be required to pass an entry screening exams).
iii) Minimum of 10 points for Interim Joint Matriculation Board (IJMB) examinations candidates.
iv) Candidates with a minimum of second class honours degree in any of the basic sciences or related health sciences (other than Physiotherapy) from Universities recognized by the Senate of KASU.

All the candidates for Direct Entry must also satisfy the conditions of having passed the Secondary School Certificate Examination/West African Examination Council/ National Examination Council of Nigeria with Minimum of 5 credits in Biology, Chemistry, Physics, English Language and Mathematics in not more than two sittings..

Transitional Doctor of Physiotherapy (tDPT)

i. Candidates who hold the Bachelor of Science Physiotherapy (B.Sc. PT), Bachelor of Physiotherapy (BPT) or Bachelor of Medical Rehabilitation (BMR) degree in Physiotherapy wishing to obtain the DPT may be admitted into the DPT degree programme at the 500 Level of study. However, candidates who hold the 3rd class degree or less than 2.40 of CGPA may join the 400 level.
ii. Candidates may be required to attend an interview before admission. In addition, such candidates must hold a current license to practice Physiotherapy in Nigeria.

Duration of Doctor of Physiotherapy (DPT) Programme

Minimum duration

The entry-level Doctor of Physiotherapy (DPT) programme training shall run for a minimum of six (6) academic sessions (12 semesters) for entry through UTME and five (5) academic sessions (10 semesters) for direct entry.

Maximum duration

The maximum period of the entry-level Doctor of Physiotherapy (DPT) programme training permissible shall be nine (9) academic sessions (18 semesters) for entry through UTME and eight (8) academic sessions (16 semesters) for direct entry.

Graduation Requirements

To be eligible for the award of DPT degree, a student must have passed **ALL** the prescribed courses and obtained the required number of credit units (minimum number of credit is 222 units). Also, a student must have obtained the required minimum of 2,850 hours of clinical posting/experience. Student is, similarly, required to satisfy the professional conduct for registration with Medical Rehabilitation Therapists Registration Board of Nigeria (MRTB) which is the regulatory body for Physiotherapy practice. Throughout the course of study, students are required to maintain a conduct embodied in the fundamental principles of Physiotherapy ethics. The Department as a guardian of these principles on behalf of the Regulatory body, therefore reserves the right to refuse recommending through the Faculty to the Senate the award of the degree of DPT if conduct does not conform to that expected of a prospective Physiotherapist.

New Students Orientation

The Department shall organize an orientation program to her new students (both UTME and DE) at the beginning of each session after registration. This gives an opportunity for Staff and the new students to interact with each other.

Inter-Departmental and Inter-University Transfer of Candidates

Students have to buy the inter-departmental transfer form and obtain an approval from the new department. Students will then apply for their transcripts from the previous department and obtain a signed approval for transfer.

Classification of the Degree

Doctor of Physiotherapy degree is an **Unclassified** degree.

Methods for Course Evaluation

All registered students are expected to follow their given Time Table strictly and attend their lectures, practical and clinical postings punctually as well as continuously. Except on health grounds, a student must have at least 75% of lecture/practical/clinical attendance in all registered courses to be eligible for any examinations.

i) All courses taught during each semester shall be examined at the end of each semester, EXCEPT the clinical practice courses that shall be examined with external moderation at the end of each session.

ii) The Pass mark for all courses offered/taught at 100 Level to 600 Level shall be 50% (50 Marks out of 100), EXCEPT GST courses which shall be 40% (40 marks out 100).

iii) Continuous assessment constitutes 40% of the total marks while the end of semester examination is 60% of the marks.

iv) Continuous Assessment can be given to the students at any time before the end of the semester. No student is allowed to be absent without any genuine and approved reason.

v) An external examiner shall moderate all examinations in theoretical, practical and clinical courses. In the case of practical/clinical examinations re-sit where the external examiner may not be available, his/her permission will be sought

vi) At 400 Level to 600 Level, any student that fails **only** clinical examination shall resit the clinical examination **only** for that session. If he/she fails the resit clinical examination he/she shall repeat the level.

vii) For each subject area, the internal examiners shall be those who teach the various courses who shall set questions, mark the answer scripts and compute the results. They shall also jointly sign the examination result.

viii) Clinicians who are involved in the clinical training of the students shall also be involved in conducting the clinical examination.

Progression from one level to another

100 Level to 200 Level:

Student must pass all the **core subjects** (Mathematics, Chemistry, Physics and Biology). Scores obtained by a student in the courses under each **subject** shall be summed and least average of 50% shall be the pass mark for each **subject**.

Repeating a Class

Students shall only be allowed to repeat a class (level) only once. Students shall NOT be allowed to repeat 100 level. They shall be asked to withdraw from the programme.

200 Level to 300 Level:

A student must pass all the courses registered at 200 Level, totalling 49 credit units (51 credit units for DE students). Students who fail NOT MORE than 25% (i.e. approx. 13 credit units) of the total credits registered at 200 Level shall **resit** the failed courses. A candidate who fails MORE than 25% but NOT MORE than 50% (i.e. 14 to 25 credit units) of the total credit units registered **OR** fails **any** resit examination shall **repeat** the level. A student who is to repeat for a second time **OR** fails MORE than 50% (i.e. above 25 credit units) of the total credit units registered shall be advised to withdraw.

Note: The following applies to levels 200 and above

a) **GST** courses are not determinants of progression but they are determinants of graduation (students shall be allowed to carry over GST courses).
b) For scores obtained by each student, an average of 50% shall be the pass mark for each **course.**
c) **Re-sit** students can only obtain a maximum score of 50% in each of the **resit** course.

300 Level to 400 Level:

A student must pass all the courses registered at 300 Level, totalling 47 credit units. Students who fail NOT MORE than 25% (i.e. approx. 12 credit units) of the total credit units registered at 300 Level shall **resit** the failed courses. A candidate who fails MORE than 25% but NOT MORE than 50% (i.e. 13 to approx. 24 credit units) of the total credit units registered **OR** fails **any** resit examination shall **repeat** the level. A student who is to repeat for a second time **OR** fails MORE THAN 50% (i.e. above 24 credit units) of the total credit units registered shall be advised to withdraw.

400 Level to 500 Level:

A student must pass all the courses registered at 400 Level, totalling 46 credit units. Students who fail NOT MORE than 25% (i.e. approx.12 credit units) of the total credit units registered at 400 Level shall **resit** the failed courses. A candidate who fails MORE than 25% but NOT MORE than 50% (i.e. 13 to 23 credit units) of the total credit units registered **OR** fails **any** resit examination shall **repeat** the level. A student who is to repeat for a second time **OR** fails MORE than 50% (i.e. above 23 credit units) of the total credit units registered shall be advised to withdraw.

500 Level to 600 Level:

A student must pass all the courses registered at 500 Level totalling 46 credit units. Students who fail NOT MORE than 25% i.e. (approx.12 credit units) of the total credit units registered at 500 Level shall **resit** the failed courses. A candidate who fails MORE than 25% but NOT MORE than 50% (i.e. 13 to 23 credit units) of the total credit units registered **OR** fails **any** resit examination shall **repeat** the level. A student who is to repeat for a second time **OR** fails MORE than 50% (i.e. above 23 credit units) of the total credit units registered shall be advised to withdraw.

600 Level:

A student must pass all the courses registered at 600 Level, totalling 39 credit units. Students who fail NOT MORE than 25% (i.e. approx. 10 credit units) of the total credit units registered at 600 Level shall **resit** the failed courses. A candidate who fails MORE than 25% but NOT MORE than 50% (i.e. 11 to approx. 20 credit units) of the total credit units registered **OR** fails **any** resit examination shall **repeat** the level. A student who is to repeat for a second time **OR** fails MORE than 50% (i.e. above 20 credit units) of the total credit units registered shall be advised to withdraw..

Overall, there are basically, 3 phases in the programme; the Pre-clinical, Introductory and Clinical phases. The pre-clinical phase span the duration from 100 level to 200 level, the 300 level is the Physiotherapy introductory phase where physiotherapy modalities and basic procedural courses are taught, whereas, the duration from 400 level to 600 level makes the clinical phase. No student shall be allowed to repeat any of the phases more than once. Also, students shall not be allowed to proceed to the clinical phase of the programme until all the prescribed courses in the pre-clinical phase are passed satisfactorily.

The programme for the award of DPT shall be made up of six (6) years of formal studies in the University comprising three (3) years of pre-clinical training in basic sciences, basic medical sciences and basic physiotherapy; and three years of clinical training. The clinical training shall comprise:

1. Hospital based training
2. Community physiotherapy postings in rural health centres

3. A minimum of eighteen(18) weeks of outside clinical postings in 4-6 facilities relevant to physiotherapy (other than teaching hospitals) as approved by the training institutions

PERFORMANCE EVALUATION CRITERIA

The procedures for the assessment of students in Health Sciences will correspond with the knowledge, abilities and skills to be developed through the training program. These include the following:

- Written examination
- Clinical assessment and examination
- Practical assessment and examination
- Laboratory report
- Planning execution and reporting of project work
- Essay assignments
- Literature surveys and evaluation
- Collaboration project work
- Seminars/project presentation

EXAMINATIONS

Conduct of Examinations in the University

Refer to the University Regulations on conduct of examinations.

Attendance of Lectures and Continuous Assessment

i) All registered students of the Department are expected to follow their given time table strictly and attend their lectures punctually as well as continuously. Except on health grounds, a student **must** have at least 75% lecture attendance in all registered courses to be eligible for any examination.

ii) Continuous assessment constitutes 40% of the total marks while examination is 60%.

iii) Continuous Assessment can be given to the students at any time before the end of the semester. No student is allowed to be absent without any genuine and approved reason.

iv) At the end of each semester, examinations are conducted for courses taught in various departments. Such examinations may take the form of written papers, oral examination, practical submission and defence of written projects or any combination as approved by the University Senate.

v) The timetable for the examinations shall be fixed on the various notice boards in the University stating the time and venues of all examinations.

vi) Students who have clashes in the examination schedule should immediately report to their departmental/faculty examination officers.

vii) Students who fail to report to the appropriate officers of the University of Impending Clashes in examination schedules shall hold themselves responsible for any difficulty that may arise.

viii) Continuous assessment during course work shall be included in determining the final score of candidates in the examination results.

ix) Any student who absents himself/herself from any examination without University approval and has not withdrawn from the course of study shall be graded 'F' for such course(s) and the grade(s) shall be reflected in the calculations of his/her GPA for that semester or session.

x) Subject to the approval of the Senate, the University may grant concessions to student(s) who could not complete or write all the examinations due to certified illness or other exigencies acceptable to the Senate.

xi) Without prejudice to the regulations cited under academic affairs, the University reserves the right under the law establishing the University to decide finally on all academic matters.

xii) Students who satisfy the requirements for examinations shall be issued with an exam card, which shall be presented to the invigilator in all examinations.

xiii) No student shall be allowed to enter the examinations hall without the University identity card and Examination card.

xiv) A candidate shall not be allowed to enter the examination hall if he or she is more than 30 minutes late, only if the invigilator is satisfied with the reason for the lateness and shall not be allowed extra time at the end of the examination

xv) A candidate shall not be allowed to leave the hall within 45 minutes after the commencement of an examination except under exceptional circumstances approved by the Head of Department or the examinations officer.

xvi) On entering the examination hall, it is the responsibility of the candidate to draw the attention of the invigilator to any paper or material on his/her seat, table or on the floor around him/her to enable for such material to be removed before the examination starts.

xvii) A candidate shall deposit any handbag, brief case, books, handout, etc. outside the examination hall or in front of the invigilator before the commencement of an examination.

xviii) All electronic equipment, GSM handsets, calculators are not allowed into the examination hall except where a specific item is allowed for the paper.

xix) A candidate shall comply with the instructions to candidates as set out in the question paper and answer book or other materials supplied.

xx) A candidate shall use only the answer books provided and also comply with any instructions given by the invigilator.

xxi) All rough work must be crossed out neatly before a candidate finally submits his/her script to the invigilator. Note that rough work should only be done in the answer booklet.

xxii) Under no circumstance shall a candidate write anything other than his/her admission number and name on the question paper. Supplementary answer sheets or book, even if they only contain rough work must be neatly packed into the answer booklet.

ACADEMIC MISCONDUCT

i. A candidate shall not remove or mutilate answer booklet or any other material or paper supplied, whether used or not except that he/she may remove from the examination hall at the end of the examination, the question paper. If the removal or mutilation relates to answer booklets the candidates shall be liable to rustication for 2 semesters.

ii. Until candidates are allowed to leave the examination room, no copy of any question paper shall be removed from the examination hall. Any candidate who removes any question paper from the examination hall before the time candidates are allowed to leave the examination hall shall be liable to rustication for one semester.

iii. In the event that a candidate for good cause has to leave the examination hall temporarily, he/she shall be accompanied by the invigilator or security personnel on duty. A candidate shall neither sit for another nor procure another person to sit for him or any other candidates in any examinations conducted by this University. Such conduct amount to great misconduct and shall attract expulsion from the University.

iv. In the course of writing an examination conducted by this University, a candidate shall neither give nor accept any assistance whatsoever from any other candidate or person from within or outside the examination hall. A breach of this regulation shall attract rustication or cancellation of the candidate's paper and may attract further action from the senate.

v. Smoking is not permitted inside the examination hall and the cigarette or pipe being smoked shall be seized by the invigilator or any security personnel authorized by him and the erring candidate shall be liable to rustication for a semester.

vi. At the end of the time allocated for an examination, a candidate shall gather his/her scripts together neatly and hand them over to the invigilator. A candidate is responsible for the proper return of his/her scripts.

vii. A candidate shall sign the attendance register at the commencement of the examination and at the end while submitting his/her answer scripts. In the event of any dispute arising as to whether or not a candidate sat for the examination and submitted his answer scripts, the signature on the attendance register shall be conclusive proof thereof.

viii. A candidate shall not, either before or after an examination, threaten or blackmail an invigilator, lecturer, examiner, member of senate or committee or any other officer connected with the examination. Such a conduct is a grave misconduct from Senate which may even lead to expulsion from the University.

For the avoidance of doubt, examination misconduct regulated by these rules shall also include the following:

i. Substitution or alteration of answer scripts by any means after they have been submitted to the invigilator at the end of the examination.

ii. Breaking into the house, office or vessel of an examiner, lecturer, invigilator or any other officer having anything to do with the marking or evaluation of the performance of candidates at an examination center conducted by this University.

iii. Obtaining, procuring or possessing by any means a preview of questions intended for any examinations being conducted by this university before its due date and time.
iv. Any other misconduct related to examinations conducted by the University, which the Senate may from time to time consider as examination misconduct.
v. Any candidate found to have breached or committed any of the examination misconducts shall be liable to rustication for at least two semesters expulsion as determined by Senate after due process.

REGULATIONS GOVERNING ORGANIZATION, CONDUCT AND DISCIPLINE OF STUDENTS

General conduct

1. Students are advised to take good care of their personal belongings. The University will not be responsible for any damage to or loss of personal effects.
2. Absence from lectures, tutorials, practical classes or clinical postings requires the approval of heads of departments and the Deans concerned.
3. Students are not allowed to consume, keep, sell or indulge in alcoholic drinks in the University premises. Students caught contravening this provision shall be made to face Disciplinary Committee.
4. Students are not allowed to consume, keep or sell illicit drugs within the University premises. Students caught indulging in this act shall be handed over to the police. Attention is particularly drawn to penalty of decree 2 of 1984 of the Federal republic of Nigeria. If convicted, the student will automatically cease to be a KASU student.
5. Students caught with firearms within the premises of the University shall be handed over to the police. If convicted the student shall cease to be a KASU student.
6. Students shall not indulge in physical combat in the University. Students who violate this provision may face civil offence prosecution by the police.
7. Students shall not take laws into their hands. Any student who takes laws into his/her hands shall face civil offence prosecution by the police.
8. Nudity is not allowed on the University campuses. Any student caught contravening this regulation shall face civil offence prosecution.

9. Any student caught stealing within the University community shall be handed over to the University Security Division to face criminal prosecution by the police
10. Political parties and their activities are not allowed on campus but as citizens of the country, students are free to belong to any political party of their choice.
11. Any student accused of rape shall be handed over to the police and would be liable to expulsion from the University if convicted by a law court.
12. Any student caught forging any document relevant to his/her admission shall be expelled from the University and if already graduated, the degree certificate will be withdrawn.
13. Student who appears before the relevant University committees and gives false evidence that may mislead the University authority shall be liable to serve punishment
14. Students are responsible for the conduct of their visitors within the premises of the University.
15. Students who indulge in sexual harassment of fellow students and other members of the University community shall be liable to severe punishment or even expulsion
16. Cultism is prohibited in the University. Students caught conducting cultist activities on campus shall be expelled.

DRESS CODE

Students are strongly advised to dress decently to reflect the civilized institution that is the University. Decent dressing is a prerequisite for attending lectures, practical, tutorials, workshops, seminars and such other functions within the University. Indecent dressing includes among others, the wearing of short, skimpy dresses like body hugs, spaghetti and transparent wear by all students as well as the plaiting or weaving of hair and putting on earrings by the male students specifically. Students contravening this rule would be sent out of the University.

ABSENCES

Absent from course work and examination

Any student planning to be away from the university when the university is in session shall submit a written application for it to be processed and reply given before the set date for the planned trip.

Illnesses

Any student that is ill and cannot partake in academic activities has to provide a medical summary of his/her condition, which should be duly signed and stamped by a doctor from the University Health Services.

REGISTRATION WITH HEALTH FACILITIES

The KASU Sick Bay is functional and equipped to deal with minor injuries and illnesses. Referrals for major cases are made to Barau Dikko Teaching Hospital (BDTH). All students are required to register with the medical centre.

LABORATORY SAFETY

Biological research may involve the handling of living or dead organisms that are harmful to man. It may also involve the use of toxic or corrosive materials. Therefore:

i. Students are required to obey laboratory safety rules and signages to avoid preventable accidents.
ii. As part of the safety measures, all students are expected to wear as instructed, their complete Personal Protective Equipment (PPE) when in the Laboratory for Practical.

Prohibition of change of name and date of birth

A student shall only use the name and date of birth with which he is admitted/transferred into the university and which appears on the certificates used to secure the admission. This name and date of birth shall be used in all certificates and transcripts, respectively to be issued by the university.

Deferment and extension of studies

Students in the department can defer their studies after satisfying the necessary conditions for deferment of studies under the general guidelines of the university. The conditions which may attract such favour include medical problems, call for acceptable national service and other genuine excuses acceptable to the university. Candidates should notify the university through the department of their resumption of studies after the expiration of the period of their deferment.

Students who have exhausted the maximum allowable period of their studies in the university can apply for extension of studies to enable them complete their course of study. Such applications can be channelled to the university senate through the Head of Department and the Faculty Board.

FUNCTIONS OF LEVEL COORDINATORS

There shall be for every level of undergraduate studies a coordinator to serve as an adviser to the students of that particular level on matters relating to their academic affairs, discipline and social life on the campus.

Level coordinators perform the following functions:

a. To ensure that a candidate offered fresh admission met all the stipulated requirements before he is cleared for registration.
b. To ensure that no withdrawn student from the University as a result of poor academic performance or examination misconduct is issued clearance to register for another session.
c. To inform and paste the courses students are to register for the session in a conspicuous place including correct courses codes, course titles and the total credits applicable for the session which must be dated and endorsed by the head of department.
d. To be familiar with all the students he/she is coordinating and to also act as their mentor as well as have full details of students' personal and academic records (including screening for entry qualifications).
e. To guide students on the proper way to communicate with university authorities in cases of sickness, maternity leave, travelling, suspension of studies and other complaints that are related to their academic pursuit
f. To ensure that before signing the course registration form, each student must have correctly registered the courses he/she is supposed to register for, including carry over courses before the portal is closed at the beginning of every session.
g. To make sure proper documentation of Academic records of students is done, including approved suspension of studies, repeat, rustications and transfer.
h. To obtain and keep mobile phone numbers of students and their parents, guardians for ease of communication in terms of need.

i. To collate prepare and present student results in the correct format approved by the university to the departmental board of examiners under the guide of departmental examination officer
j. To Prepare and issue students with end of session academic report which must be signed by the head of department and examination officer immediately results are approved by the university senate.
k. To undertake such other matters as may be assigned to him by the Head of Department for the level he is coordinating.

FUNCTIONS OF DEPARTMENTAL EXAMINATION OFFICER

Departmental examination officer shall perform the following functions

a. To prepare departmental lecture time table at the beginning of each semester
b. To prepare departmental examination time table and invigilation schedule at the end of each semester
c. To collect results from servicing department within the faculty and from faculty examination officer in the case of results coming from other servicing faculties and forward same to the level coordinators.
d. To prepare and present department results at the faculty board of examiners meeting in the format approved by the university.
e. To report all cases of examination misconduct to the faculty examination misconduct committee immediately.
f. To liaise with faculty examination officer in handling all cases of result verification.
g. To liaise with level coordinators to properly guide students on university examination regulations.

AWARD OF DEGREE AND DISTINCTION

The Department shall award a distinction to a student who scores an average of 70% and above in a subject area, provided that all the courses are passed at the first attempt. The subject areas are:

Electrotherapy

Exercise therapy and Kinesiology

Manual Therapy

Neurology and Paediatrics Physiotherapy

Orthopaedics and Sports Physiotherapy

Cardiopulmonary Physiotherapy.

Community Physiotherapy

The list of successful students for the degree shall be published in alphabetical order, indicating those who pass with distinction in any subject.

Course Outline

The General Studies courses available are as follows:

Course Code	Course title	Units
GST 111	Communication in English I	2
GST 112	Logic, Philosophy & Human Existence	2
GST 113	Nigerian Peoples and Culture	2
GST 121	Use of Library, Study Skills and ICT	2
GST 122	Communication in English II	2
GST 123	Communication in French	2
GST 124	Communication in Arabic	2
GST 211	Environment & Sustainable Development	2
GST 222	Peace and Conflict Resolution	2
GST 223	Introduction to Entrepreneurship	2
GST 224	Leadership Skills	2
GST 311	Entrepreneurship	2

Course Structure of 100 Level

First Semester

Course Code	Course Title	Units
BIO 101	General Biology I	3
BIO 107	General Biology Practical I	1
CHM 101	General Chemistry I	3
CHM 107	General Chemistry Practical I	1
CSC 101	Introduction to Computer Science	3
GST 111	Communication in English	2
GST 113	Nigerian Peoples and Culture	2
GST 121	Use Library, Study Skills & ICT	2
MTH 101	Elementary Mathematics	3
PHY 101	General Physics I	3
PHY 107	General Physics Practical I	1
Total		**24**

Second Semester

Course Code	Course Title	Units
BIO 102	General Biology II	3
BIO 108	General Biology Practical II	1
CHM 102	General Chemistry II	3
CHM 108	General Chemistry Practical II	1
STA 102	Introduction to Statistics	2
GST 112	Logic, Philosophy and Human Existence	2
GST 122	Communication in English II	2
PHY 102	General Physics II	3
PHY 108	General Physics Practical II	1
Total		**18**

Electives: In addition to the above, the students must offer one of the electives below:

Course Code	Course Title	Units
GST 123	Communication in French	2
GST 124	Communication in Arabic	2
Grand Total		**20**

Course Structure of 200 Level

First Semester

Course Code	Course Title	Units
ANT 211	Histology of Basic Tissues	1
ANT 213	Introductory Anatomy & Gross Anatomy of the Upper and Lower Limbs	3
ANT 215	Embryology and Medical Genetics	2
HPH 221	General principles, blood and body fluids	2
HPH 223	Cardiovascular and Respiratory Physiology	2
HPH 225	Endocrine and reproductive Physiology	2
BCH 251	General Biochemistry I (Chemistry and functions of Amino acids and Proteins)	1
BCH 253	General Biochemistry II (Chemistry and functions of Carbohydrates, Lipids and Nucleic acids)	2
PSY 201	Medical and Abnormal Psychology	2
GST 211	Environment & Sustainable Development	2
GST 223	Introduction to Entrepreneurship	2
MMB 203	Medical Microbiology I	2
Total		**23**

Course Code	Course Title	Units
CSC 211	Introduction to computer Science for DE	2

Second Semester

Course Code	Course Title	Credit Unit
ANT 222	Gross Anatomy of Thorax, Abdomen, Pelvis & Perineum	3
HPH 224	GIT and Renal Physiology	2
HPH 226	Neurophysiology and special senses	2
HPH 222	Practical Physiology	1
BCH 254	General metabolism	2
BCH 258	General biochemistry Practicals	1
PHY 224	Electrophysics	2
SOC 202	Medical Sociology and social institutions	2
NSC 201	Introduction to Nursing Practice	2
GST 222	Peace and Conflict Resolution	2
GST 224	Leadership Skills	2
MMB 202	Medical Microbiology II	2
Total		**23**

Course Structure of 300 Level

First Semester

Course Code	Course Title	Units
GST 311	Entrepreneurship	2
ANT 311	Gross Anatomy of Head & Neck	2
ANT 313	Neuroanatomy	2
PST 301	Clinical Anatomy for Physiotherapy	3
PST 303	Direct moderate & Low Frequency Currents	2
PST 305	Exercise Physiology	2
PST 307	Hydrotherapy	2
PST 309	Introduction to Therapeutic Exercise	2
PST 311	Basic Therapeutic Skills	2
PST 315	Practical Exercise Therapy	3
PHA 301	General Principles of Pharmacology	2
Total		**24**

Second Semester

Course Code	Course Title	Units
ANT 312	Radiological Anatomy and Techniques	2
PST 302	Clinical Physiology for Physiotherapy	2
PST 304	Electromagnetic fields and energy	2
PST 306	Musculoskeletal and other Therapeutic Exercise Regime	3
PST 308	Biomechanics & Kinesiology	2
PST 310	Pathokinesiology	2
PST 312	Theory & Practice of soft tissue manipulation	2
PST 314	Ultrasonic Therapy, Conductive Heat and Cold	2

PST 316	Practical Electrotherapy	3
PHA 302	Pharmacology in Physiotherapy	2
NUT 302	Nutrition in Health & Diseases	2
Total		**24**

Course Structure of 400 Level

First Semester

Course Code	Course Title	Units
PST 401	Synopsis of Medical Rehabilitation	2
PST 403	Diagnostic tests in Musculoskeletal Physiotherapy	3
PST 405	Orthopaedic Physiotherapy	3
PST 407	Clinical Reasoning & Decision Making	3
PST 409	Manual Therapy (Spinal & Peripheral)	3
PAT 401	Pathology I	2
PHE 401	Health Systems Management	2
PST 413	Community & Primary Health Physiotherapy	3
PST 411	Clinical Posting in Orthopaedic Physiotherapy	3
Total		**24**

Second Semester

Course Code	Course Title	Units
PST 402	Physical Diagnoses	2
PST 404	Physiotherapy in Arthropathies	3
PST 406	Professional ethics and Jurisprudence I	2
PST 408	Physiotherapy in Women's Health	3
PST 410	Sports and Recreational Physiotherapy	2
PST 412	Evidence based Practice	2
PST 414	Clinical Posting in Women's health	3
ANT 408	Functional Neuroanatomy	2
PST 416	Clinical Posting in Community/Primary Health Physiotherapy	3
Total		**22**

Course Structure of 500 Level

First Semester

Course Code	Course Title	Units
PST 501	Neurophysiotherapy I	3
PST 503	System review and screening for Physiotherapy	3
PST 505	Physiotherapy in Health Promotion	2
PST 507	Assistive Technology in Rehabilitation	2

PST 509	Biostatistics	2
PAT 501	Pathology II	2
PST 511	Physiotherapy in Respiratory Disorders	2
PST 513	Physiotherapy in Cardiovascular Disorders	2
PST 515	Clinical posting in Neurophysiotherapy	3
PST 517	Clinical Posting in Cardiopulmonary Physiotherapy	3
Total		**24**

Second Semester

Course Code	**Course Title**	**Units**
PST 502	Ergonomics & Occupational Health Physiotherapy	2
PST 504	Professional Ethics and Jurisprudence II	2
PST 506	Paediatric Physiotherapy	3
PST 508	Pedagogy in Physiotherapy	2
PST 510	Physiotherapy in Palliative Care	2
PST 512	Administration & Management in Physiotherapy Practice	2
PST 514	Fundamentals of Pain and Management	2
PHP 501	Introduction to public health practice I	2
PST 516	Research Methodology	2
PST 518	Clinical posting in Paediatrics	3
Total		**22**

Course Structure of 600 Level

First Semester

Course Code	Course Title	Units
PST 601	Clinical Out- postings (SIWES)	6
PST 603	Clinical Measurement & Instrumentation	2
PST 605	Intensive Care Physiotherapy	2
PST 607	Integumentary Physiotherapy	2
PST 609	Physiotherapy in Geriatrics	2
PST 611	Neurophysiotherapy II	3
PST 613	Research Proposal Seminar	2
Total		**19**

Second Semester

Course Code	Course Title	Units
PST 602	Research Project	6
PST 604	Physiotherapy Summative Clinical Postings	3
PST 606	Specialty Postings	3
PST 608	Physiotherapy in Disaster Management	2
RAD 602	Medical Imaging and Clinical Interpretations	2
PHP 602	Introduction to public health practice II	2
PST 610	Issues in Healthcare (Seminar)	2
Total		**20**

Courses Description

GENERAL STUDIES 100 LEVEL COURSES

GST 111: Communication in English I
Effective communication and writing in English; Language skills; writing of essay answers; Comprehension; Sentence construction; Outlines and paragraphs; Collection and organization of materials and logical presentation; Punctuation.

GST 112: Logic Philosophy and Human Existence
A brief survey of the main branches of Philosophy. Symbolic Logic, Special symbols in symbolic Logic-conjunction, negation, affirmation, disjunction, equivalent and conditional statements. Law of tort. The method of deduction using rules of inference and bi-conditionals qualification theory. Types of discourse; Nature or arguments; Validity and soundness; Techniques for evaluating arguments; Distinction between inductive and deductive inferences; etc. (Illustrations will be taken from familiar texts, including literature materials, novels, Law reports and newspaper publications).

GST 113: Nigerian Peoples and Culture
Study of Nigerian history, culture and arts in pre-colonial times, Nigerian's perception of his world, Culture areas of Nigeria and their characteristics; Evolution of Nigeria as a political unit; Indigene/settler phenomenon; Concepts of trade; Economic self-reliance; Social justice; Individual and national development; Norms and values; Negative attitudes and conducts (cultism and related vices); Re-orientation of moral Environmental problems.

GST 121: Use of Library, Study Skills & ICT
Brief history of libraries, Library and education, University libraries and other types of libraries, Study skills (reference services). Types of library materials, using library resources including e-learning, e-materials; etc, Understanding library catalogues (card, OPAC, etc) and classification, Copyright and its implications, Database resources, Bibliographic citations and referencing. Development of modern ICT, Hardware technology Software technology, Input devices, Storage devices, Output devices, Communication and internet services, Word processing skills (typing, etc).

GST 122: Communication in English II
Logical presentation of papers, Phonetics, Instruction on lexis, Art of public speaking and oral communication, Figures of speech, Précis, Report writing.

GST 123: Communication in French
Introduction to French, Alphabets and numeric for effective communication (written and oral), Conjugation and simple sentence construction based on communication approach, Sentence construction, Comprehension and reading of simple texts.

OR

GST 123: Communication in Arabic
Introduction to Arabic alphabets and writing systems, Elementary conversational drills, Basic reading skills, Sentence construction in Arabic.

100 LEVEL COURSES

BIO 101: General Biology I
Characteristics of living and non-living things. Scientific methods to biology concepts. Taxonomy of living organism – Microbes. Plants including field and herbarium methods. Morphology and life cycles of phyla and plant kingdoms. Cell concepts, structure, organization, functions, and chemical and physical characteristics. Plant and tissues and organism systems. Elements of biological chemistry – aspects of organic, inorganic and physical chemistry relevant to biology.

BIO107: General Biology Practical I
Laboratory experiments designed to illustrate the topics covered in BIO 101

CHM 101: General Chemistry I
Atoms, molecules and chemical reactions. Modern electronic theory of atoms. Electronic configuration, periodicity and building up of the periodic table. Hybridization and shapes of simple molecules. Valence Forces; Structure of solids. Chemical equations and stoichiometry; Chemical bonding and intermolecular forces, kinetic theory of matter. Elementary thermochemistry; rates of reaction, equilibrium and thermodynamics. Acids, bases and salts. Properties of gases. Redox reactions and introduction to electrochemistry. Radioactivity.

CHM 107: General Chemistry Practical I
Laboratory experiments designed to reflect topics presented in courses CHM 101 and CHM 102. These include acid-base titrations, qualitative analysis, redox reactions, gravimetric analysis, data analysis and presentation.

CSC 101: Introduction to Computer Science
Survey of computers and information processing and their roles in society. This course introduces a historical perspective of computing, hardware, software, information systems, and human resources and explores their integration and application in business and other segments of society. Students will be required to complete lab assignments using the PC's operating system, and several commonly used applications, such as word processors, spreadsheets and graphics presentations applications. Internet and on-line resources, browsers and search engines.

MTH 101: Elementary Mathematics
Elementary set theory, subsets, union, intersection, complements, venn diagrams. Real numbers; integers, rational and irrational numbers, mathematical induction, real sequences and series, theory of quadratic equations, binomial theorem. Complex numbers; algebra of

complex numbers; the Argand diagram. De-Moivre's theorem, nth roots of unity. Circular measure, trigonometric functions of angles of any magnitude, addition and factor formulae.

PHY 101: General Physics I

(Mechanics, Thermal Physics and Waves)

Space and time, units and dimension, kinematics; Fundamental laws of mechanics, statics and dynamics; work and energy; Conservation laws. Moments and energy of rotation; simple harmonic motion; motion of simple systems; Elasticity; Hooke's law, Young's shear and bulk moduli, hydrostatics; Pressure, buoyancy, Archimedes' principles; Surface tension; adhesion, cohesion, capillarity, drops and bubbles; Temperature; heat, gas laws; laws of thermodynamics; kinetic theory of gases; Sound. Types and properties of waves as applied to sound and light energies. Superposition of waves. Propagation of sound in gases, solids and liquids and their properties. The unified spectra analysis of waves. Applications.

PHY 107: General Physics Practical I

This introductory course emphasizes quantitative measurements, the treatment of measurement errors, and graphical analysis. A variety of experimental techniques should be employed. The experiments include studies of meters, the oscilloscope, mechanical systems, electrical and mechanical resonant systems, light, heat, viscosity, etc., covered in PHY 101 and PHY 102. However, emphasis should be placed on the basic physical techniques for observation, measurements, data collection, analysis and deduction.

BIO 102: General Biology II

Genetics and its scope. Darwin's theory. Mendel and his laws of inheritance. Physical and chemical basis of inheritance. Man as an object of genetics. Modifications of classical Mendelian ratios. Heredity and environment. Probability and the chi square test Quantitative and multiple allelic inheritance. Sex development, sex linkage and sex abnormalities. Mutations, Heredity, Eugenics and the future of mankind.

BIO 108: General Biology Practical II

Experiments designed to emphasize the practical aspects of topics of course BIO 102

CHM 102: General Chemistry II

Historical survey of the development and importance of Organic Chemistry; Electronic theory in organic chemistry. Isolation and purification of organic compounds. Determination of structures of organic compounds including qualitative and quantitative analysis in organic chemistry. Nomenclature and functional group classes of organic compounds. Introductory reaction mechanism and kinetics. Stereochemistry. The chemistry of alkanes, alkenes, alkynes, alcohols, ethers, amines, alkyl halides, nitriles, aldehydes, ketones, carboxylic acids and derivatives. The Chemistry of selected metals and non-metals. Comparative chemistry of group IA, IIA and IVA elements. Introduction to transition metal chemistry.

CHM 108: General Chemistry Practical II

Continuation of CHM 107. Additional laboratory experiments to include functional group analysis, quantitative analysis using volumetric methods.

STA 102: Introduction to Statistics (2 Credit units)
Statistical data: types, sources and methods of collection. Presentation of data: tables, charts and graphs. Errors and approximations, frequency and cumulative distributions. Measures of location, partition, dispersion, skewness and kurtosis. Rates, ratios, and index numbers. Scope of statistical methods in health sciences. Measures of location, partition and dispersion. Elements of probability.

PHY 102: General Physics II
(Electricity, Magnetism and Modern Physics)
Electrostatics; conductors and currents; dielectrics; magnetic fields and electro- magnetic induction; Maxwell's equations; electromagnetic oscillations and waves; Coulomb's law; methods of charging; Ohm's law and analysis of DC circuits; AC voltages applied to Inductors, capacitors and resistance.

PHY 108: General Practical Physics II
This is a continuation of PHY 107

200 LEVEL COURSES

ANT 213: Introductory & Gross Anatomy of the Upper and Lower Limbs (3 Credit units)
Philosophy, Methodology, Language and general descriptive terms in Anatomy. Skin, fascia, muscles, bones, joints, blood vessels, nerves, lymphatic, etc. The pectoral girdle and associated joints (Sternoclavicular, acromioclavicular). Muscles acting on the shoulder joint, The axilla and Brachial Plexus, The Anatomy of the Breast, Blood supply. Venous drainage and lymph drainage, Flexor and Extensor-Compartments of arm, The elbow joint, and muscle acting on it. The flexor and extensor compartment of the fore-arm, Wrist Joint, and muscles acting on it, The anatomy of the hand, The blood supply and Anastomosis of the upper limb (around 17 scapula, humerus, elbow and hand), Dermatomes of the upper limb. The front of the thigh I (Femoral triangle, femoral canal and hernia, subsatorial canal). The front of the thigh II: The medial side of the thigh; The gluteal region; The back of the thigh; The popliteal fossa; The front of the leg and the dorsum of the foot; The lateral side of the leg; The back of the leg; The sole of the foot (arches of the foot); The hip joint and the knee joint; The tibio-fibular joints, ankle joint and the joints of the foot. Gross anatomy shall include classroom lectures and dissection sections. Examinations shall include both written and practical examinations and viva-voce.

ANT 215: Embryology and Medical Genetics (2 credit Units)
General embryology including Oogenesis, gametogenesis, development of ovarian follicle, ovulation, fertilization, cleavage, formation of blastocyst, implantation, folding of embryo, placentation that is formation and functions of placenta and umbilical cord; fetal membranes and development of limbs. Mitotic changes in oocytes, formation and function of the zonapellucida, follicular growth. Preovulatory menstruation, post-ovulation atresia.

Spermatogenesis and the spermatozoa. Testis before and at puberty, seminiferous epithelium. Spermatogenic cycles and time rotations in spermatogenesis, cycles and seasons—puberty, oestrous and menstrual cycles, ovulation, pseudopregnancy and pregnancy, delays in reproduction. Fertilization- egg and sperm transport, capacitation, acrosome reaction and sperm penetration. Immediate response to sperm penetration, prenuclear development and syngamy. Errors of fertilization, fertilization in vitro. Pre-embryonic period- cleavage, embryonic cell differentiation, foetal membranes, implantation and formation of placenta at birth. Development of Cardiovascular system, Integumentary system, Respiratory system, Digestive system, Urological system. Developmental anomalies and clinical syndromes. Introduction to genetics, chromosomal abnormalities, single gene disorders and multi factorial disorders.

HPH 221: General Principles, Blood and Body Fluids (2 Credit Units)

General physiology; Introduction to Physiology (different fields of physiology and their relationship with other field of science), homeostasis and control systems of the body, it also covers cellular physiology including cell structures and organelles, cell membrane, cell juncture, cellular transport passive and active, Dynamic resting membrane potentials and its causes, Electrolyte changes, Homeostasis and positive/negative feedback mechanism and its significance. Osmosis, diffusion, active transport, Cell organelles — forms and functions, Intracellular communications, receptors and ions channels. Cells signalling, introduction to path clamp technique.

Excitable Tissues and Autonomic Nervous System; Basis of RMP, AP, graded potentials, synapses types mechanism and properties, neuromuscular junction, Mechanisms of skeletal muscle contraction, structure of skeletal muscle, types of muscle fibres, types of contraction, excitability changes, ionic changes, mechanical changes, Metabolic changes, thermal changes. Fate of lactic acid, effect of successive stimuli tetanus, and effect of loading, Fatigue and its causes, comparison between skeletal, smooth and cardiac muscles. Electrophysiology of the heart, cardiac cycle, venous return, circulatory adjustment to exercise. General, origin, distribution and functions of parasympathetic and sympathetic nervous system, Pharmacology of autonomic nervous system, Classification, comparison between sympathetic and Parasympathetic, sympathetic, origin distribution, function. Parasympathetic origin distributed and functions, Types of automatic receptors and the receptors pharmacology, adrenergic ribers and receptor, distribution and catecholamine, sympathomimetics and sympatholytics, cholinergic fibres and receptors acetylcholine, sites cholinergic blockers, ganglionic blockers muscarinic and nicotinic receptors. Atropine, parasympathomimetic and parasympatholytic.

Blood, Immunology and blood vessels, general functions of blood, composition of blood, plasma proteins, types, origin and its functions. Red blood cells structure, functions, haemoglobin and it functions and haemoglobinopathies, Erythropoiesis and factors affecting it, Anaemias, degradation of Haemoglobin, bilirubin and development of jaundice, Fe3+ metabolism, Blood coagulation, bleeding time and mechanism of blood coagulation, clotting time, haemophilia and purpura, Role of Ca2+ and platelets in blood coagulation. It also covers blood cells, classification, basis and type of immunity, role of lymphocytes, T-lymphocyte, immunogloblins, humoral and cell mediated immunity. It explains the basis of immunological diseases, blood groups and Blood transfusion. Arteries, arterioles, vein, venules, capillaries,

Interstitial fluids (IF) and vessels through which they flow. Lymph and lymph vessels, Cerebrospinal fluid and its vessels.

HPH 223: Cardiovascular and Respiratory Physiology (2 Credit Units)

Cardiovascular physiology; Functional anatomy of the heart, functional organization system of the CVS, cardiac properties, Cardiac cycle, study of cardiac cycle, ECG, pulse, heart sound, Jugular venous pulse, Innervations of the heart, heart rate and its regulation, Cardiac output and factors affecting it, Types of blood vessels, and peripheral resistance. Arterial blood pressure, types, factors affecting, maintaining and regulating it. Types of shock, Effect of haemorrhage, oedema, types and causes. Pulmonary circulations, Coronary circulation, environmental effect on CVS, exercise, flight high attitudes, Heart failure, myocardial infarction. The basis of heart Automaticity (a) Sinoatrial node (pace maker) (b) Atrioventricular node (c) The Bundle of Hiss, Stanius experiment Heart Block, fibrillation, Refractory period of the cardiac muscle: Extra systole External manifestations of cardiac Activity: Apex beat, Heart Sounds, Control of cardiac activity, Nervous control, Reflex control: Intracardiac reflex responses – Reflex effects of the pericardium, reflex effects of the coronary pulmonary, atria and ventricular vessels, Effects of vascular reflexogenic zones, Reflex effects of visceral receptors. Effects of the cerebral cortex on cardiac Activity. Humoral control of Cardiac Activity, effects of electrolytes: K+& Ca2+ ions, effects of neurotransmitters, effects of hormones: Thyroxine, insulin, Gonadal hormones, Adrenaline and nor adrenaline. Types of shock, Effect of haemorrhage, oedema, types and causes. Pulmonary circulations, Coronary circulation, environmental effect on CVS, exercise, flight high attitudes, Heart failure, myocardial infarction.

Respiratory physiology; Introduction, general functions of respiratory passage, factors protecting respiratory alveoli. I.P.P. its significant, surfactant, respiratory work., lung volumes and capacities, vital capacities and its significant, Dead space, Neural regulation of respiration, peripheral, central and chemical regulation of respiration, centres of respiration in medulla oblongata, hypoxia, cyanosis, effect of high attitude on respiration, Role of respiratory system in maintaining Acid-Base Balance, effect of exercise on respiration, effect of diving on blood gases.

HPH 225: Endocrine and Reproductive Physiology (2 Credit Units)

Physiology of pregnancy and endocrine-related changes: Pregnancy and foetal development, physical and physiological changes of pregnancy. The antenatal period: Antenatal medical team, antenatal care. Complications of Pregnancy: ectopic pregnancy, gestational diabetes, pre-eclamptic toxaemia, eclampsia, ante partum haemorrhage, placenta-previa, Back pain, Sacroiliac joint dysfunction, sciatica, pregnancy associated osteoporosis, nerve compression syndromes (carpal tunnel syndrome, posterior tibial nerve compression), circulatory disorders (varicose veins in the legs, haemorrhoids, muscle cramp, thrombosis and thromboembolism).Physical and physiological changes of labour: the stages of labour, signs of labour, normal labour and delivery, labour pain and causes of labour pain, the effect of labour on maternal and foetal physiology, the effect of labour on the pelvic floor and perineum, the duration of labour, positioning in labour.

An in-depth explanation into the Female genital system structure, structure of ovary, graafian follicle, structure of uterus fallopian tubes, mechanism of female puberty, ovarian cycle,

oogenesis, menstrual cycle, vaginal cycle, ovulation, female contraception hormones, control of pregnancy, factor maintaining pregnancy, formation of placenta, functions and hormones of placenta, delivery, mechanism and hormonal control, hormones acting on female breast, mechanism of lactation, prolactin hormone abnormalities of lactation. It also discusses the male genital organ, structure of testis, spermatogenesis, hormonal control and temperature, function of testosterone hormone, mechanism of male puberty sperm and sperm count.physiology of menopause, coitus, fertilization physiological abnormalities of human reproduction:- pubescence abnormalities, chromosome Abnormalities, abnormalities of genital tract, differentiation, infertility, Abnormalities of menstrual cycle: - Secondary amenorrhoea, dysmenorrhoea, oligomenorrea, menorragia, metorhagia, Eunuchoidism.
General functions of hormones, nature of hormones, mechanisms of action and control. Hypothalamic releasing factors, pituitary glands interior, pituitary protection hormone functions, hormones, function and control G.H function and its abnormalities, and other releasing factors under control of hypothalamus, thyroid gland hormones T3 and T4 physiological function and its abnormalities, Adrenal (minerals corticoids, glucocorticoids and sex hormones), Adrenal cortex structure and hormones steroid hormones, functions and its abnormalities. Medullary Hormones, Ca^{2+} functions and homeostasis, Hormones regulating serum calcium (PTH, Calcitonin, 21, DH cholecalciferol, pancreatic hormones, hormones Rosulates glucose, dialect mellitus, pineal gland hormones, melatonin.

BCH 251: General Biochemistry I (2 Credit units)
(Chemistry and Functions of Amino acids and Proteins)
Structure, properties and classification of amino acids; pH, pKa and buffer; Peptides. Reaction of specific amino acids; separation and sequence analysis of peptides; chemistry of proteins and enzymes including their basic structural levels, and types of bonds stabilizing them; Properties, functions, and classifications of proteins.

BCH 253: General Biochemistry II (2 Credit units)
(Chemistry and Functions of Carbohydrates, Lipids and Nucleic acids)
Classification and physical properties of carbohydrate, structure of glucose: projection and perspective formulae; structure and properties of other monosaccharide; Chemistry, classification and properties of lipids, methods of analyses of lipids; lipoproteins, membranes and membrane structure. Chemistry of nucleic acid, (bases, sugars and phosphoric acids, nucleosides, nucleotides, and nucleic acids). The structure and roles of RNA and DNA.

NSC 201: Foundations of Nursing Science (2 Credit units)
Principles of nursing care. Fundamental procedures in general nursing – bed-making, patient lifting, monitoring of vital signs, skin care and bed sore prevention, wound dressing, first aid, use of suction machine and intensive care. The student should undertake a rotation in general nursing. Students are to observe and assist in basic nursing procedures such as wound dressing bandaging, patients positioning on bed, bed making, monitoring of vital signs, nursing procedures in the management of tracheostomy patients, management of patients as artificial respirator, preparation of patient for theatre, lifting techniques, administration of injectable drugs, identification and interpretation of patients charts, introduction to nursing diagnosis, nurse therapist relationship. Preparation and composition of a nursing trolley.

GST 211: Environment and Sustainable Development (2 Credit units)
Man – his origin and nature, Man and his cosmic environment, Scientific methodology, Science and technology in the society and service of man, Renewable and non-renewable resources – man and his energy resources, Environmental effects of chemical plastics, Textiles, Wastes and other material, Chemical and radiochemical hazards. Introduction to the various areas of science and technology. Elements of environmental studies.

GST 223: Introduction to Entrepreneurship (2 Credit units)
Introduction to entrepreneurship and new venture creation; Entrepreneurship in theory and practice; The opportunity, Forms of business, Staffing, Marketing and the new venture; Determining capital requirements, Raising capital; Financial planning and management; Starting a new business, Feasibility studies; Innovation; Legal Issues; Insurance and environmental considerations. Possible business opportunities in Nigeria.

ANT 211: Histology of Basic Tissues (2 credit units)
Introduction to histological techniques for light microscopy, units of measurements in microscopy. Components of the cell, cell cycle, chromosomes, protein secretion and transcription of DNA. General histology of the basic tissue; including special connective tissues, epithelial tissues, muscle tissues, nervous tissue, lymphoid tissues, cartilage, bone and blood. The course will have a laboratory component.

ANT 222: Gross Anatomy of Thorax, Abdomen, Pelvis and Perineum (3 Credit Units)
Anatomy of Thorax:
The thoracic cage; apartures and its frame work: Anatomy of the lungs and pleurae, respiratory movements; superficial structure, Thoracic duct, Sternal joints, Sternocostal joints, Interchondral joints Costochondral joints, Costovertebral joints, Joints and Ligaments of the Vertebral column, intercoastal arteries and veins, internal thoracic artery, mediastina and diaphragm, Lateral parts and pleurals, Roots of the lungs, Lobes of the lungs, Intrapulmonary structure, heart and large vessels; Sternocostal surface of the heart, Surface anatomy of the heart Chambers of the heart, Structure of walls of heart trachea, bronchi; lymphatic drainage of thorax; correlation of course with clinical medicine; regional anatomy, surface anatomy and radiological anatomy. The student will dissect the thorax.
Anatomy of Abdomen:
The Abdominal walls including planes; hernia, peritoneal cavity. Diaphragm, Abdominal viscera – stomach, intestines, liver, pancreas, spleen, pancreas, kidneys and suprarenal. The blood vessels and nerves in the abdomen, Lymphatic GIT. Applied anatomy, surface and radiological anatomy. The student will dissect the abdomen.
Anatomy of Pelvis and Perineum:
The bony pelvis, joints of the pelvis, determination of sex of pelvic bones. The pelvic organs – male and female. Pelvic walls and floor, pelvic peritoneum, viscera, nerves and vessels. The perineum – male and female; external genitalia – correlation with reproduction, child birth and

other clinical aspects. Superficial/Deep perineal pouches. The student will dissect the pelvis and perineum.

HPH 222: Practical Physiology (1 Credit unit)
Introduction to laboratory physiology, physiology laboratory techniques. Laboratory sessions on basic physiology experiments, especially those related to the nerve cell and blood functions

HPH 224: GIT and Renal Physiology (2 Credit Units)
Renal physiology:
Introduction, General functions of the kidney, Structure of kidney, nephron structure. Differences in Nephron structure. Mechanism of urine formation, GFR, tubular transport, absorption and tubular secretion, Blood flow to kidney autoregulation of blood flow, blood vessels, arteries, arterioles, vein, venules, capillaries, Interstitial fluids (IF) and vessels through which they flow, Lymph and lymph vessels, Cerebrospinal fluid and its vessels. Cortical and Juxtaglomerular apparatus, and determination of renal blood flow. Clearance, insulin and Para amino hippacric acid clearance, glomerular filtration rate, factors affecting it, Proximal convoluted tubules, loop of henle, and distal convoluted tubule, Differences between cortical and medullary nephron, vasa recta, and tubular transport in glucose maximal. Role of urea and other electrolytes concentrate urine, concentration of urine and renal regulation of body water (osmolarity) and chabedesinspidus. Renal regulation of blood (ECF) volume, micturition reflexes innervation of urinary bladder, Role of kidney in acid base balance, Basis of dialysis, Diuretics, excretion of hormones Gluconeogenesis. Counter-current system. Water volume and ionic regulation. Micturition. Abnormalities of renal function. The skin function, temperature regulation, abnormalities of temperature regulation mechanism; factors regulating metabolism. Conditions for measuring basal metabolic rate. Compartmentalization and composition of body fluids. Determinants of Glomerular Filtration Rate: Glomerular capillary filtration coefficient (Kf) Bowman's capsule Hydrostatic pressure, Glomerular capillary, colloid Osmotic pressure Organic solutes that are reabsorbed: Glucose, amino acids, organic acids, peptides and proteins, urea. Organic solutes that are reabsorbed and secreted: Urea. Inorganic ions that are reabsorbed: Mg2+,Ca2+,PO42,-SO24-, HCO3- Inorganic ions that are secreted: Renal handling of H+ ions. Inorganic ions that are reabsorbed and secreted: K+, Na+ Renal handling of Nat and water Renal handling of Fe, vitamins, carbohydrates, proteins and lipids Renal Failure- proteinuria. Loss of concentrating and diluting ability, Acidosis, Abnormal Nat metabolism, Control of Glomerular Filtration: Activation of the sympathecus. Hormonal and Autacoids control of Renal Circulation – Angiotensin II. Endothelial – Derived Nitric Oxide – prostaglandins and Bradykinin; Auto regulation of GFR. Mechanism of urine concentration counter – current mechanism; current multiplier system. Quantity, composition and properties of urine.
GIT Introduction to GIT:
Functions of GIT. Methods of studying the functions and structure of the G.I.T: Layers, Neural and Humoral control, Autonomic innervations of the G.I.T. Sympathetic and Parasympathetic Gastro-intestinal reflexes Functional types of movements in the G.I.T; Propulsive and mixing. Hormonal control of G.I.T. Motility. Oral Cavity: Mastication. Salivary glands, functions of Saliva, Salivary reflexes, Inhibition of salivary secretion. Physio-anatomical consideration of the stomach; Functions of the stomach, mixing and propulsion of

food in the stomach, regulation of gastric motility. Gastric Secretion; Composition, properties and functions of gastric juice. Effects of Nutrient patterns on gastric secretion. Regulation of gastric secretion Stomach (gastric) emptying. Vomiting; Composition, properties and functions of pancreatic juice, effects of Nutrient composition on pancreatic secretion, functions of the liver, Composition, properties and functions of bile ejection, regulation of production and secretion of bile by the liver, mechanism of gall bladder emptying, gall stones. Intestinal glands-villi and microvilli, types of intestinal digestion Uniqueness of intestinal secretion of enzymes, small intestine motility control — neural, hormonal and small intestine reflexes, intestinal reflexes and intestinal inhibitory reflexes, gastro-intestinal reflex. Large intestine and Rectum, Colonic mortality, defecation, control of colonic and rectal motility myogenic and neural control Physiology of absorption, mechanism of absorption, absorption in the mouth, Stomach, small and large intestines (Note: absorption of CHO, proteins, fats, water, sodium etc.) Location and functions of the Alimentary canal, Sensations of satiation, hunger and thirst; appetite physiology of Gastrointestinal disorders, Appendicitis, Diarrhoea, constipation cancerous tumours eating disorders peptic ulcer Jaundice. Effects and factors, which modify it Nervous influences, Humoral factors, Biological rhythms, Sex, Age & posture Indices of Cardiac Activity: Stroke (Systolic volume Cardiac Output, Heart work, venous return. Functions of the liver, Composition, properties and functions of bite bile ejection. Regulation of production and secretion of bile by the liver. Mechanism of gall bladder emptying. Gall stones. Intestinal glands-villi and microvilli. Types of intestinal digestion Uniqueness of intestinal secretion of enzymes small intestine motility control of small intestine motility – Genic, neural, hormonal small intestine reflexes. Intestino-intestinal and anointestinal inhibitory reflexes; gastro-intestinal reflex. Large intestine and Rectum, Colonic mortality, defecation, control of colonic and rectal motility myogenic and neural control Physiology of absorption, mechanism of absorption, absorption in the mouth, Stomach, small and large intestines (Note: absorption of CHO, proteins, fats, water, sodium etc.) Location and functions of the Alimentary canal, Sensations of satiation, hunger and thirst; appetite physiology of Gastrointestinal disorders, Appendicitis, diarrhoea, constipation cancerous tumours eating disorders peptic ulcer Jaundice. Physiology of peptic ulcer, gastrin and vomiting. C.C.K., other G.I. Hormones, Functions of duodenum, jejunum and ileum secretions, Digestion and mechanism of absorption of fat, absorption, motility and functions, proteins, carbohydrate, water and vitamins, large intestine secretions, absorption, motility and functions Defecation. Diarrhoea, Liver and Biliary System Including histological structure of liver, liver functions and liver functions test, jaundice and causes, types of hepatitis. Biliary system, structure of gall bladder, function of gall bladder, Structure and functions of bile salts, bile pigments direct and indirect bilirubin Gall stone and exocrine functions pancreas, hormonal and nervous control of pancreatic secretion, diseases of biliary system and pancreas.

HPH 226: Neuro-Physiology and Special Senses (2 Credit units)

The central Nervous system- brain and the spinal cord. The Peripheral nervous system. Sensory system including receptors, types and pathway of sensation, pain sensation, analgesic system, disturbances of sensation thalamus, sensory cortical areas, sensory functions of cerebral cortex, reaction to sensation. Reflex arc, Properties of reflex arc, general reflexes, spinal reflexes, stretch reflex, Muscle tone. Motor system sensory cortical areas including motor cerebral cortex, basal ganglia, cerebellum, temperature control, hypothalamus, limbic

system, reticular formation, higher functions of cerebral cortex, learning and memory abnormalities, Speech and its abnormalities, temperature control, Excitation, action potential, development of resting membrane potential, action potential in skeletal, cardiac and other smooth muscles, characteristics of action potential in nerve tissue. Nerve cell- morphology of a nerve cell, types of nerve fibres, propagation of action potential in different types of nerves, salutatory and neighbourhood conductions. Synapse- morphology of synapses, types of synapses, synaptic transmission of impulses, properties of synaptic transmission, synaptic junction. Applied physiology. Neuromuscular junction- morphology of a neuromuscular junction, neuromuscular transmission, transmission of impulse at neuromuscular junction. Applied physiology-myasthenia gravis. Muscles- Morphology of skeletal, cardiac and other smooth muscles. Molecular basis of muscle contraction- structure and function of the contractile protein, structure and function of regulatory proteins. Mechanism of contraction, excitation and coupling in muscle contraction. Applied physiology of muscle contraction. Autonomic Nervous System (ANS) - general description of the ANS, basic physiology of the ANS and homeostasis Posture reflex function of spinal cord, sleep and EEG mechanism and abnormalities.

Special senses; including eye structure cornea, lens, vitreous humour, litlary body and aqueous humour structure and functions of retina, visual path way, accommodation reflex and papillary light reflex, colour vision, theories, visual activity, visual field, area 17, 18, 19 and 8, Mechanism of retina stimulation, Abnormalities and lesions of visual pathway, Hearing including introduction. Physical properties of sound including structure of external ear, Middle ear and internal cochlea, Structure of cochlea, basement membrane, organ of corti, mechanism of hearing, hearing pathway, abnormalities of hearing, hearing test, physical properties of sounds, area 42, 22. Sensation linear and rotational, utricles, saccules pathway, equilibrium, smell sensation including structure of smell receptors mechanism of stimulation, olfactory nerve, olfactory bulb and limbic system. Taste sensation on the tongue, types of taste, mapping of different taste sensation ant 2/3 path ways, to cortex and Abnormalities.

BCH 254: General Metabolism (2 Credit units)

(Carbohydrate metabolism, Lipids metabolism, Amino acids Metabolism, Nucleic acid metabolism)

Degradation and digestion of carbohydrates; Storage polysaccharides and cell walls. Glycogenesis, glycogenolysis glycolysis, tricarboxylic acid cycle, Phosphogluconate pathway, cori cycle, calvin cycle and gluconeogenesis, glyoxylate cycle. Disorders of carbohydrate metabolism; Oxidation of fatty acids. Formation and oxidation of ketone bodies, biosynthesis of fatty acids, triacylglycerols, phospholipids, glycolipids, cholesterol, Acetyl CoA as a central precursor for biosynthesis of lipids. Genetic disorders of lipid metabolism.

Metabolism of amino acids and their derivatives; urea cycle; metabolism of inorganic nitrogen and sulphur cycle. Genetic Disorders of amino acid metabolism. Metabolism of purines and pyrimidines, Nucleosides and Nucleotides. Disorders of Nucleic acid metabolism. Genetic code, gene structure. Replication, Transcription and Translation. Genetic diseases and gene therapy.

BCH 258: General Biochemistry Practical (1 Credit units)

(General Biochemistry I & II practical)

Introduction to the laboratory and laboratory equipment. Safety, housekeeping, washing and drying of glassware in the laboratory. Accuracy of measurement and transfer of liquids and solids. Qualitative and quantitative tests for amino acids and proteins. Introduction to photometry and colorimetry; standard curve and absorption spectra; Biuret method and the estimation of proteins. pH and buffer systems.

PHY 224: Electrophysics II (2 Credit units)
Elementary Kinematics and vector algebra. Newton's laws of motion. Static forces acting on a human body. Elasticity and strength of materials. Momentum conservation; application to contusion and fracture during impacts, and to similar medical situations; conservation of energy; the first law of thermodynamics; applications to metabolism and work done by various organs of the body. Angular momentum and torque. Harmonic motion and diffusion. Applications to osmotic pressure and passage of substances through capillary walls. Molecular motion in gases: distribution functions and the Boltzmann principles. Intermolecular collisions and transport processes. Equilibrium in external fields; the centrifuge and measurement of molecular weight. Electrostatics: Coulomb's Law, electric fields, Gauss law, the electrostatics potential, Laplace's equation, point charges, continuous charge distributions and dipoles, capacitors, dielectrics and field energy. Nernst-Planck equation and membrane potentials. Debye-Huckel theory of electrolytes: Solubility and electrophoresis of proteins, quasi-static flow of charge, distribution of potential in volume conductors. Application of electrocardiography. Magnetic fields, Amperes laws; the law of Biot and Savart: Magnetic properties of matter. Faraday's law of induction. Electrical circuits, oscillators, feedback, with application to medical instrumentation e.g. pacemakers.

GST 222: Peace Studies and Conflict Resolution (2 Credit units)
Basic Concepts in peace studies and conflict resolution, Peace as vehicle of unity and development, Conflict issues, Types of conflict, e. g. Ethnic/religious/political/economic conflicts, Root causes of conflicts and violence in Africa, Indigene/settler phenomenon, Peace –building, Management of conflict and security. Elements of peace studies and conflict resolution, Developing a culture of peace, Peace mediation and peace-keeping, Alternative Dispute Resolution (ADR).

GST 224: Leadership Skills (2 Credit units)
Transformation is a fundamental shift in the deep orientation of a person, organization or society such that the world is seen in new ways and new actions and results become possible that were impossible prior to the transformation. Transformation happens at the individual level but must be embedded in collective practices and norms for the transformation to be sustained. Leadership Development Programme (LDP) proposes novel approaches to teaching and learning, which emphasizes the practical involvement of participants. It is interactive and involves exercises and actual implementation of breakthrough projects by teams that make difference in the lives of the target population. In this course, leadership concepts comprising of listening, conversation, emotional intelligence, breakthrough initiatives, gender and leadership, coaching and leadership, enrolment conversation and forming and leading teams will be taught.

PSY 201: Medical and Abnormal Psychology (2 Credit units)
Emphasis on common types, causes, diagnostic characteristics and treatment of mental disorders observable in the Nigerian and other cultures. Minor and serious types. Descriptive account of belief concerning personality, in the courses of human behavior in African societies. perception and awareness (state of consciousness) sensory perception. growth and development (characteristics of different age groups maturity and aging) learning and intelligence. motivation and emotion. personality (theories of personalities in African concept). conflict adjustment and mental health.

SOC 202: Medical Sociology and Social Institutions (2 Credit units)
Comparative study of human societies and cultures. Particular emphasis on institutional arrangements such as economy, politics, family, religion, education, art, health systems. Attention will be paid to socio-cultural change processes as well as the rise of radical perspectives relevant to our contemporary situation.

MCB 203: Medical Microbiology I (2 Credit units)
This course will Introduce the students to basic concepts of infectious and communicable Diseases via: Bacteriology, Parasitology, Virology, Mycology and Immunology. In each of the aforementioned sub fields lectures will be tailored towards diagnosis of infectious diseases with emphasis on laboratory tests and their interpretations. Lectures to be covered Include: Introduction to Medical Microbiology, definition, scopes and classification; Microbial control, sterilization and disinfections; Modes of Transmission of Infectious diseases; Classification of Bacteria of Medical Importance; Bacterial Morphology; Basic structure and function of cell components; Bacterial Nutrition; Growth and Reproduction; Bacterial Pathogenicity and Virulence; Classification, Basic properties and Laboratory Diagnosis of Viral diseases; Introduction to Medical Parasitology, an overview; Morphology, Biology and Classification of Protozoa; Introduction to Mycology; Defence Mechanism against microbial Infection; Introduction to basic Diagnosis including staining methods and cultural characteristics of common bacteria.

MCB 202: Medical Microbiology II (2 Credit units)
General microbiology of epidemic and pandemic diseases causing microorganisms. brief history, overview of biology, modes of transmission, virulence, classification, prevention, diagnoses with emphasis on laboratory tests and interpretations of results.

300 LEVEL COURSES

GST 311: Entrepreneurship (2 Credit units)
Some of the ventures to be focused upon include the following: Soap/Detergent, Tooth brushes and Tooth paste making. Photography; brick, nails, screws making; dyeing/Textile blocks paste making; rope making, plumbing, vulcanizing, brewing, glassware, production/Ceramic, production Paper production; Water treatment/Conditioning/ Packaging; Food processing/packaging/preservation; Metal working/Fabrication – Steel and aluminum door and windows; Training industry; Vegetable oil/and Salt extractions; Fisheries/Aquaculture; Refrigeration/Air conditioning; Plastic making; Farming (crop);

Domestic Electrical wiring; Radio/TV repairs; Carving; Weaving; Brick laying/making; Bakery ; Tailoring; Iron welding; Building drawing; Carpentry; Leather tanning; Interior decoration ;Printing; Animal husbandry (Poultry, Piggery, Goat etc); Craft – Blacksmith, Tinsmith etc; Sanitary wares; Vehicle maintenance; Book keeping.

ANA 311: Gross Anatomy of Head & Neck (2 Credit units)
Osteology of the skull, mandible & the cervical vertebrae. The neck (skin, fascia, superficial vessels and nerves); The triangles of the neck; The deep vessels and nerves of the neck; The root of the neck; The neck viscera; Cervical sympathetic trunk; Lymphatic drainage of the Head and Neck; The scalp and face; Parotid region; The temporomandibular joint; Removal of the brain, gross features of the brain (sulci, gyri, and sensory and motor areas).

ANA 313: Neuroanatomy (2 Credit units)
Introduction; Components of the nervous system, functions of the nervous system, energy requirements and metabolism. External features & core structures of cerebrum, cerebellum or brainstem. The central nervous system (CNS); pathways in the CNS: Nuclei, projections, associations and commissural pathways; Cerebrospinal fluid -formation, composition, circulation, function, clinical consideration and the ventricular system. Spinal cord- External features and spinal nerves. Core structures of the spinal cord. The peripheral nervous system (cranial and spinal nerves); Autonomic nervous system (sympathetic and parasympathetic nervous systems). Blood supply to the central nervous system.

PST 301: Clinical Anatomy for Physiotherapy (3 Credit units)
A comprehensive introduction to the study of human anatomy with emphasis on the clinical implications associated with each topic thereby linking the gross anatomy to functional and clinical relevance. The course will cover the clinical aspects of anatomy of each body system to form a basis for physiotherapy diagnosis and treatment. It will involve tying the anatomic information directly to realistic, clinical scenarios. Each system shall be considered under the following: Anatomy; Disorders; Clinical Applications and Anatomical Terminologies, Classification of joints, Muscles and types of contractions, Bone and Classification, Plane of movements and types of movements.

PST 303: Direct, moderate and low frequency Currents (2 Credit units)
Forms of current: Direct, alternating and low frequency electrical stimulating currents: physiology of nerve stimulation. Electrical stimulation of the excitable tissues (nerve and muscle), accommodation. Direct current (galvanism) and therapeutic applications –definition, parameters, methods and techniques of application (e.g. iontophoresis) especially in the management of wounds and hyperhidrosis. Physiological effects, therapeutic uses, indications and contraindications for, dangers of, precautions and records of treatment. Moderate frequency currents (diadynamic currents, High voltage pulsed galvanic currents, interferential currents, Russian/Rebox currents). Definition, parameters, methods and techniques of application. Physiological effects, therapeutic uses, indications and contraindications for, dangers of, precautions and records of treatment. Low frequency (Faradic) currents (faradic type, interrupted direct, sinusoidal currents) –definition, parameters, motor points. Principles, methods and techniques of application (e.g. faradic bath, faradism under pressure).

Physiological effects, therapeutic uses, indications, contraindications for, dangers of, precautionary measures, and treatment record. Electro-Analgesia (Transcutaneous Electrical Nerve Stimulation (TENS): Definition, parameters, types (different forms of TENS), technique of application, therapeutic uses, indications and contraindication, dangers and precautions. Interferential therapy: Definition, parameters, methods and techniques of application, physiological effects, therapeutic uses, mechanisms of pain relief, indications and contraindications, dangers and precautions. Electrodiagnosis: strength–duration curves, electromyography, chronaxie, rheobase, nerve conduction test, faradic test etc. Values of each method to be discussed. Physiology of pain, pain modulation, pain gate theory and scientific evidence of its proof.

PST 305: Exercise Physiology (2 Credit units)

Bioenergetics: carbohydrate, fat and protein metabolism. Instruction in muscular and skeletal anatomy; molecular and cellular basis of muscle contraction; fuel utilization; neurophysiology of motor mechanics; systemic physiological responses (respiration, blood flow, endocrine secretions, and others); fatigue and exhaustion; muscle and body training; physiology of specific exercises and activities; physiology of injury; and the effects of disabilities and disease. The physiological processes involved in physical or motor activity, including sensorimotor interactions, response mechanisms, and the effects of injury, disease, and disability. Exercise for improvement of cardiopulmonary endurance in healthy individuals. Benefits and hazards of exercise in diseases: hypertension, diabetes mellitus, coronary heart disease, obesity and overweight, osteoporosis, etc. Detailed discussion of the conditions mentioned above is required. Exercise dosage: intensity (use of VO2max and HRR), duration, frequency and mode. Computation of VO2max (direct and indirect methods), target HR and target VO2. Physical activity and exercise: definition, types (isotonic, isometric and isokinetic), effects on different body systems especially on the cardiopulmonary, musculoskeletal, endocrine and nervous systems. Forms of exercise (walking, jogging, running, the use of treadmill and bicycle ergometer). Merits and demerits of treadmill and bicycle ergometer exercises. Physical fitness and its components. Ergogenic aids: Statistics and different categories with appropriate examples. International laws that govern the use of ergogenic aids.

PST 307: Hydrotherapy (2 Credit units)

Historical background of Hydrotherapy, Hydrodynamic laws – Archimedes Law, Pascal's Law, Surface tension, etc. Body immersion and weightlessness, Therapeutic pools (types), Whirlpools and Baths, Pool accessories. Therapeutic pool environment-pool temperature, pH, humidity, ventilation, water hygiene (disinfectant), Methods of exercise in therapeutic pools – conventional method and Bad-Raqaz method, Physiological effects, therapeutic uses, indications, contraindications, dangers (including waterborne diseases) and safety measures, Application to specific conditions – paralytic (poliomyelitis), spastic, rheumatic and orthopaedic conditions, Pool plants – components, care and maintenance of pool, Exercises in water versus exercises on land – advantages and disadvantages.

PST 309 : Introduction To Therapeutic Exercise (2 Credit units)

Skeletal muscle structure and function (applied anatomy), myopathies and neuromuscular junction diseases, Energy systems- Exothermic, Endothermic, etc, body fluids and their significance to exercise (exercise physiology, common pathway of metabolism). Effect of single bout of exercise on body organs, Physiological responses and adaptations to chronic exercise in health and diseases, Evaluations of cardiopulmonary responses to exercise, Effect of exercise on body composition, Clinical measurement, evaluation and instrumentation in strength development. Indications for strength development in health and disease. Techniques for major muscles in the body.

PST 311: Basic Therapeutic Skills (2 Credit units)
Definition of Physical Therapeutic skills. Communication skills, interpersonal skills, time management skills, multitasking skills. Physical stamina, detailed orientation, compassion, treatment planning. Leadership skills, equipment knowledge, technology skills. Observational skills, practice empathy. Aptitude; thorough understanding of all therapeutic procedures effected under the major specialties. Attitude; therapists attitude towards the patient, relatives, colleagues, other professionals and the work environment. Critical thinking skills; effective assessment and differential diagnosis. Emotional and psychoactive health. Common evaluative devices (assessment tools in Physiotherapy)

PST 315: Practical Exercise Therapy (3 Credit units)
Students will be exposed to the practical hands-on skills and demonstration of the use of all exercise therapy modalities taught in the theory courses PST 306, PST 308, PST 309, PST 310, PST 312 as applied in Physiotherapy practice. Students will be examined and externally moderated at the end of the session.

PCL 301: General Principles of Pharmacology (2 Credit units)
Topics include definition of pharmacology, history, scope and subdivision of pharmacology. Pharmacokinetics principles; Routes of drug administration, kinetics of drug absorption, distribution, biotransformation, elimination, pharmacodynamics; calculation of dosage, variability in drug response and pharmacovigilance and adverse drug reactions mechanisms of action of drugs on membranes., enzymes, receptors, neural and non-hormonal system, transmission and modulation. Factors affecting drug action in man, alternative medicine and aims of therapeutic. Drug induction, inhibition and interactions, species, age and gender variations in drug metabolism, Drug resistance, dependence and allergies, Teratogenesis, mutagenesis and carcinogenesis.

NUT 302: Nutrition in Health and Diseases (2 Credit units)
Introduction to food substances: carbohydrates, proteins, fats and oils. The nutritional values of food additives; their effects on health and diseases. Food processing, presentation, preparation and diet therapy. Relationship of digestion and absorption of food. Nutritional quality of foods and diets selection and formation. Balanced diets, weaning diets, use of food composition tables. Nutrition requirements of individuals and recommended daily calorie intake. Food in relation to life cycles, fitness, illnesses. Nutritional factors in diseases. Aetiology of nutritional disorders such as kwashiorkor; marasmus, diabetics, assessment and

advices. Enteral and parenteral nutrition, indications and contraindications of some diets and illnesses.

PST 302 : Clinical Physiology for Physiotherapy (2 Credit units)
A comprehensive introduction to the study of human physiology with emphasis on the clinical implications associated with each topic thereby linking the physiology and the clinical relevance. The course will cover the clinical aspects of the physiology of each body system to form a basis for physiotherapy diagnosis and treatment. It will involve tying the physiologic information directly to realistic, clinical scenarios. Each system shall be considered under the following: Physiology; Disorders; Pathophysiology; Clinical applications and medical terminologies.

PST 304 : Electromagnetic Fields and Energy (2 Credit units)
Review of electromagnetic spectrum. Infrared and Ultra violet rays (luminous and non-luminous radiations): Principles governing production and physical principles of application. Merits of each modality. Methods, procedures and techniques of application. Physiological effects, therapeutic uses, indications, contraindications for, dangers of and precautionary safety measures, treatment record. Laser therapy: Principles of production, types and uses. Physical principles of application, methods, procedures and techniques. Merits of the modality. Dosage, physiological effects, therapeutic uses, indications and contraindications, dangers and safety precautions, record of treatment. Short wave Diathermy (Continuous and pulsed Electromagnetic energy): Principles of production. Physiological effects, therapeutic uses, indications and contraindications. Technique of application. Dangers and safety precautions, treatment record. Microwave Diathermy: Principles of production. Physiological effects. Therapeutic uses/effects, indications and contraindications. Techniques of application, dangers and safety precautions, treatment record. Shockwave therapy: Principles of production. Physiological effects. Therapeutic uses/effects, indications and contraindications. Techniques of application, dangers and safety precautions, treatment record.

PST 306: Musculoskeletal and Other therapeutic Exercise Regime (2 Credit units)
Stretching and flexibility exercises: definition of related terms; properties of soft tissues that affect elongation; therapeutic methods to elongate soft tissues; indications & goals; procedures for application; relaxation & inhibition in preparation for elongation; precautions & contraindications. Coordination exercises (Frenkel's exercises). Classification of movement. Fundamental and derived starting positions. Relaxed and passive movements. Free and resisted active movements. Types of resistance used for treatment. Principles of muscle strengthening in health and disease as applied to major muscles of the body. Types of resistance used for therapeutic purpose. Modalities for strengthening muscles and basis for choice. Role of motor unit in muscle strengthening. Use of medicine ball, wobble boards, Tilt tables. Relaxation techniques. Exercise programme development & design, principles of therapeutic exercise prescription. Individual and group/class exercise therapy.

PST 308: Biomechanics and Kinesiology (2 Credit units)
Bio-mechanical principles as related to human motion. Relationship of anatomical structures to physical functions. Range of muscle work (inner, middle and outer). Types of muscle contraction. Group action of muscles agonists, antagonists, fixators, synergists etc. Principles

of motion and force as applied to the body at rest and in motion. Muscular analysis of common activities of daily living (e.g. standing up from sitting, walking, brushing, hair combing, feeding, etc). Analysis of normal human gait. Methods of kinetic and kinematic gait analysis. Range of motion and causes of limitation. Types of instruments for and methods of measuring range of joint motion. Goniometry. Principles of motion and force as they apply to the body in action and in equilibrium. Range of motion and causes of limitation. Goniometry. Muscular analysis of common movements in ADL (gait, squatting, stair-climbing, etc.), sports and gymnastics.

PST 310: Pathokinesiology (2 Credit units)
Discuss approaches to kinesiologic analysis of human motion. Discuss principles, classification and clinical applications of motor skills. Clinical applications of motor skill. Identify and analyze normal and abnormal human movements e.g. normal and abnormal gait. Identify and analyze normal and abnormal human postures. Prescribe corrective therapy for abnormal motions and postures. Crutch walking: types of crutches; preparation of patient; methods of crutch-length measurement; Methods of measuring for weight bearing, dangers and safety measures. Discuss other walking aids; frame walker, walking stick/canes, pushcarts.

PST 312: Theory and Practice Of Soft Tissue Manipulation (2 Credit units)
Historical developments and definitions relating to Massage, Preparation for massage – patients, therapist, environment, Classification of massage manipulations, Individual massage manipulations, Techniques applied for: Upper and lower limbs, back, neck, face, Technique specific for: Scars, Ulcers, Oedema (including use of therapeutic lymphatism), Soft tissue injuries, Postural drainage of pulmonary secretion, Bandaging – types, uses and different methods of application, Emphasis on application of bandage for control of Oedema and support.

PST 314: Ultrasonic Therapy, Conductive Heat and Cold (2 Credit units)
Ultrasound: principles of production, physical principles governing the use of ultrasound. Methods, procedures and techniques of application. Dosage, ultrasound treatment parameters, physiological effects, therapeutic uses (e.g. phonophoresis), indications and contraindications. Dangers and precautionary safety measures, treatment record. Conductive heat (Hydro collator/hot packs, paraffin wax, Peloid mud etc.): physical principles of application, methods and procedures. Physiological effects, therapeutic uses, indications and contraindications for, dangers of and precautionary safety measures for each of the various heat producing modalities. Merits of each modality. Cryotherapy (Conductive cold): Historical development of cryotherapy, principles of chemical preparations for cold therapy and endothermic reactions, Physiological effects, therapeutic uses, indication and contraindications, Methods and techniques of application, Dangers and safety measures, treatment record. Merits of the modality.

PST 316: Practical Electrotherapy (3 Credit units)
Students will be exposed to the practical hands-on skills and demonstration of the use of all electrotherapeutic modalities taught in the theory courses PST 303, PST 304, PST 314 as

applied in Physiotherapy practice. Students will be examined and externally moderated at the end of the session.

PCL 318: Pharmacology for Physiotherapy (2 Credit units)
Concepts of the properties of drugs and chemicals and the mechanisms of their interaction with living systems and their constituent parts. In addition, drugs are classified and discussed with respect to their actions, uses and toxicity. The justification for the use of a particular drug in a few typical disease STAes will be included. Topics include: Review of general principles: Cardiovascular system: Cardiac glycosides, anti-angina and antiarrhythmics, and anticonvulsives Diuretics osmotic diuretics, carbonic anhydrate inhibitors, thiazides, loop K+ sparing diuretics. Urine PH-altering agents. Endocrine System: antidiuretic hormone.

ANT 312: Radiological Anatomy and Techniques (2 Credit units)
Basic principles of Radiological imaging of human tissue. Radiological identification of major body structures. Introduction to modern imaging techniques. Precautionary measures.

400 LEVEL COURSES

PST 401 : Synopsis of Medical Rehabilitation (2 Credit units)
Definition of Physiotherapy, Specialties in physiotherapy, Historical perspective of physiotherapy, the goals of physiotherapy, Physiotherapy modalities, Indications for Physiotherapy and Physiotherapy referrals, The role of Physiotherapists in healthcare delivery, Common evaluative devices (Assessment Tools) in physiotherapy. Definition of occupational therapy, speech therapy etc. The concept of medical rehabilitation its role within the health team and in dealing with illness. Identification of the other members of the rehabilitation team - speech therapy, occupational therapy, audiology etc and the mode of interaction between them and the physical therapy. Aims and methods of treatment utilized by medical rehabilitation professionals; theoretical perspectives and models for practice. Criteria for professionalism. Historical development – abroad and in Nigeria including major contributors (Margaret Knott, Basmajian, Bertha Bobath, Maitland, Robin McKenzie etc). Physiotherapy professional bodies – World Confederation for Physical Therapy (WCPT), APTA, CSP, CPA, Nigeria Society of Physiotherapy etc. Registration/Licensing bodies – MRTB (Nigeria), HPC (UK), Canadian Alliance (Canada). Professional responsibilities to NSP & MRTB. Roles of physiotherapy- promotion, preservation (including prevention of complications) & restoration of physical function. Ethical principles in healthcare. Codes of ethics of physiotherapy professional bodies (WCPT and NSP).

PST 403: Diagnostic Tests in Musculoskeletal Physiotherapy (3 Credit units)
Principles of physiotherapy evaluation of the patient with musculoskeletal conditions, the comprehension of procedures and techniques related to the evaluation of current and potential musculoskeletal conditions. Specific tests including but not limited to: brachial tension test, distraction test, vertebral artery test, Supine iliac compression test straight leg raise test (Laseque's test), slump test (Sitting root test), anterior apprehension test, posterior apprehension test, varus stress test, valgus stress test, Tinel's sign, Ortolani's sign, Barlow's

test, hamstring length test, Phalen's test, Lachman's test, anterior drawer sign test, posterior drawer sign test, McMurray's test, Appley's (grinding) test.

PST 405: Orthopaedic Physiotherapy (3 Credit units)
Basics of history taking, physical examination and specific assessment procedures and clinical judgments, and evaluation of patients with fractures, dislocations, osteoarthritis, rheumatoid arthritis, back pain, neck pain, spinal stenosis, soft tissue injuries etc. Students will also be taught the appropriate ways of communicating treatment goals and plans to patients with orthopaedic conditions. Principles of physical management of skeletal disorders. Epidemiology, pathology and clinical features of skeletal disorders. Assessment procedures and physical treatment of patients. Principles of physiotherapy in fracture management. Definitions, classifications and complications, conservative and surgical management. Bone infection. Disorders of osteoid formation and maintenance. Disorders of bone mineralization. Principles and physical management of disorders of skeletal muscle and adjoining soft tissue. Infection of skeletal muscles. Muscular dystrophy – Progressive, muscular, myotonic, fascio-sacpulohumeral, distal muscular and ocular myodystrophy; Amyotonia and myotonia congenital: abnormalities of the foot and hand. Myasthenia gravis. Management of chronic and acute soft tissues injuries (muscular, tendinous and ligamentous injuries, tendonitis etc). acquired and congenital abnormalities of foot and hand. Spinal disorders – neck pain, back pain, sacro-iliac joint pain, cervical and lumbar spondylosis (intervertebral disc lesions), spinal stenosis, spondylolisthesis, ankylosing spondylitis. Infectious conditions - Septic arthritis, tuberculous arthritis, osteomyelitis. Bone disorders - osteoporosis, osteomalacia, Paget's disease etc. Musculoskeletal deformities - scoliosis, kyphosis, kyphoscoliosis. Myofascial pain syndrome. Fibromyalgia. Connective tissues disorders – polymyositis, systemic lupus erythromatosus. Joint replacements (hip and knee), acute care (including precautions and safety) following surgeries (special consideration for old/elderly patients).

PST 407: Clinical Reasoning & Decision Making (3 Credit units)
Theories of clinical reasoning and clinical decision making and application to individuals in clinical settings. With guided instruction, the student will identify key elements of a case, relate relevant information from class discussion; and apply clinical reasoning skills for optimal client outcomes. Case-based problem solving that synthesize biomechanical, physiological, musculoskeletal, cardiopulmonary, and motor control/learning principles.

PST 409: Manual Therapy (Spinal and Peripheral) (3 Credit units)
Practical aspects of procedures for applying joint mobilization techniques as applied to joints in the body, manual traction for cervical and lumbar spine. Practical demonstrations of all approaches to spinal mobilization/manipulation including Cyriax, Mennel, Kaltenborn, Maitland, Nwuga, McKenzie techniques. Technique of mobilizing various joints of the body after loss of full range. Normal range of joint motion and evaluation. Causes of loss of full ROM and indications for mobilization. Modalities for joint mobilization and basis for choice. Techniques for all major joints. Definitions of joint mobilization. Physiological and accessory motions. Basic concepts of joint motion – joint shapes, sliding & rolling. Indications, goals limitations and contraindication for joint mobilization. Procedures for applying joint mobilization, including concave-convex rule. Specific mobilization techniques as applied to

joints in the body. Manual traction for cervical and lumbar spine. Safety considerations before mobilizations e.g Vertebra-Basilar Insufficiency (VBI), revision of anatomy of VBI and tests and signs. Approaches to spinal mobilization/manipulation including Cyriax, Mennel, Kaltenborn, Maitland, Nwuga, McKenzie techniques. Technique of mobilizing various joints of the body after loss of full range. Normal range of joint motion and evaluation. Causes of loss of full ROM and indications for mobilization. Modalities for joint mobilization and basis for choice. Techniques for all major joints.

PAT 401: Pathology I (2 Credit units)
Healing in different types of tissues, physiotherapy in relation to repair, changes in circulation, anemia and hyperemia: oedema formation and drainage of tissue fluids, mechanisms of development of oedema; Thrombosis, embolism and infarcts, atrophy, hypertrophy and hyperplasia, neoplasia and tumours, neurosis, osteoporosis, bone and joints diseases, skin and muscle tissues diseases.

PHE 401: Health Systems Management (2 Credit units)
The course is designed to acquaint Student in the discipline of health sciences with management information and skills in matters relating to all aspects of the national health care systems, (the primary health care, the secondary health care and the tertiary health care systems). The course gives an overview of the national health policy and the development of the national health systems. The roles of governments at each of the levels and those of the NGOs are highlighted. Modern concepts and elements of management by objectives are reviewed in the context of health planning, implementation and health programme monitoring and evaluation. Modalities for leading health team and organizing health care activities are as well highlighted. Methods and means of managing human and material resources are also covered. The course covers also various aspects of selected international health care system.

PST 411: Community & Primary Health Physiotherapy (3 Credit units)
Introduction; concept, scope, development/progress of community physiotherapy. History of Community Physiotherapy practice; Itinerant and domiciliary services, Community physiotherapy practice across countries (comparing practice, emphasis on developing regions). Challenges and future prospects of community physiotherapy. Community based rehabilitation (CBR) as a strategy for community development, disability as human rights issue, development, principles, and structure of CBR in Nigeria and Africa as compared to other regions of the world. Different models of CBR and the roles of the professionals in CBR. Basic issues in prevocational rehabilitation, roles of physiotherapy, job demand analysis, functional capacity evaluation, return to work, and job adaptation. Design, development, implementation and evaluation of community based rehabilitation (CBR) programs for and with persons with disabilities. Basic CBR concepts and frameworks, education, training strategies and their application to CBR practice, research and education. Philosophy of Community based Rehabilitation (CBR). Principles of health education. Philosophies of Primary Health Care (PHC). Primary Health Care physiotherapy services in Nigeria.

PST 413: Clinical Orthopaedic Posting (3 Credit units)
At the end of the posting, students should be able to take history, carry out physical examination and other relevant assessment procedures on patients with orthopaedic conditions. Demonstrate skills in clinical reasoning and in making clinical judgments in different orthopaedic conditions. Demonstrate skills in communicating treatment goals and plans with patients with orthopaedic conditions. Demonstrate skills in managing and evaluating patients with orthopaedic conditions commonly seen in physiotherapy. Students will be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients in fractures, dislocations, osteoarthritis, rheumatoid arthritis, back pain, neck pain, spinal stenosis, soft tissue injuries etc. Students will also be taught the appropriate ways of communicating treatment goals and plans to patients with orthopaedic conditions. Students will be examined and externally moderated at the end of the session.

PST 402: Physical Diagnoses (2 Credit units)
Definitions of diagnosis, physical diagnosis, medical diagnosis and differential diagnosis. Importance of physical diagnosis in physiotherapy. Overview of clinical reasoning skills and clinical decision making. Models of clinical reasoning process. Overview of clinical decision making skills. Drawing inferences from clinical data (history taking, health measurement, physical examination, vital signs, end-feels etc). Specific provocative movement tests and physical diagnosis in musculoskeletal conditions; physical diagnosis in neurological, paediatrics, cardiopulmonary and other conditions. Case studies/simulation for clinical reasoning.

PST 404: Physiotherapy in Arthropathies (3 Credit units)
Review of relevant anatomy where appropriate: Diagnosis in orthopaedics, subjective assessment, objective assessment, Deformities: Types (congenital and acquired) causes, examples of congenital deformities, Examples of acquired deformities, examination, medical and physiotherapy management, General bone affections, Bone dysplasias and malformations: osteogenesis imperfecta, pagets disease, Metabolic bone disease: osteoporosis, Localbone affections: oseomyelitis, tuberculous bone infection, Fracture: classification; pattern; complications; healing; deformities; management (closed and open reductions, immobilization and rehabilitation), Fracture of specific bones and sites: Humerus, forearm bones, pelvic, femur and tibia complication of fracture at specific sites should be emphasized, Displacement of joint: dislocation and subluxations (detailed discussion) dislocations and subluxations in the upper limbs, Dislocations and subluxations in the lower limbs, age and sex differences to dislocations and subluxation, Amputation: prevalence, aetiology, patient assessment, common complications, types or classification in the upper and lower limbs, psychosocial adjustment, phantom limb pairs; management: goals, bandaging, phases of physiotherapy management (preoperative, postoperative and prosthetic) Rheumatology: seropositive athritis: rheumatoid arthritis (RA), immunopathology of RA, common clinical manifestations, disease course, gemera; assessment differential diagnosis, Seronegative arthritis: ankylosing spondylitis, osteoarthritis and related disorders Metabolically related arthritic: Gout, Infectious (septic) arthritic: specific joints, hip, knee, shoulder, tuberculous arthritics (hip and spine) Connective tissue disease: systemic lupus erythematosus: all conditions must be treated adequately on the

basis of the definition, aetiology, epidemiology, examination, management with emphasis in physiotherapy management.

PST 406: Professional Ethics and Jurisprudence I (2 Credit units)
Understanding ethical problems and principles in physiotherapy. Understanding the ethics of other health professions: how they interact and what can be expected from them as correct ethical behaviour. Students should have knowledge of Private practice ethics, Business Ethics, Media Ethics, Police Ethics, Medical Ethics, Legal Ethics, and Research Ethics.

PST 408: Physiotherapy in Women's Health (3 Credit units)
Review of relevant anatomy, Pregnancy and physiology of pregnancy: Menstruation, pregnancy and fetal development, Complications of Pregnancy: ectopic, pre-eclamptic toxaemia, eclampsia, ante partum hemorrhage, placenta praevia, diabetes mellitus, Physical and physiological changes of labour: the stages of labour, signs of labor, normal labor and delivery, labor pain and causes of labor pain, the effect of labor on the pelvic floor and perineum, the duration of labor, Apgar score, Complications of labor: failure to progress, maternal and fetal distress, mal-presentation, prolapse or presentation of cord, hemorrhage (APH and PPh), contracted pelvis and cephalopelvic disproportion, The puerperium: Puerperium and its briefly activity, Complications in the puerperium: postpartum hemorrhage, venous thrombosis, pulmonary embolism, gravitational oedema, fistulas, The antenatal period: members of the antenatal medical team, antenatal problems, Sacroiliac dysfunction, osteoporosis of pregnancy, nerve compression: carpal tunnel, posterior tibial nerve compressor, circulatory disorders: varicose veins in legs, haemorrhoid, cramp, pain relief in labor: drugs for pain relief in labour, TENS in the management of labor pain, Lamaze (distraction analgesia). Postnatal problems: urinary retention, urinary incontinence, deep vein thrombosis, pulmonary embolism, Caeserian section: pain in CS, respiratory problems in CS, teaching effective coughing, TENS in CS, Common gynecological problems: pelvic inflammatory disease, cystocele, urethrocele, enterocele, uterine prolapse, dysmennorrhoea, female athlete triad, Detailed approach continence and in continence. Where appropriate conditions must be discussed in detail including the definition, aetiology, epidemiology, investigation, medical and physiotherapy management. Students will be exposed to instructing women before and after child birth in appropriate exercises. Students will also be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients with gynaecological problems. Students will also be exposed to the appropriate ways of communicating treatment goals and plans to the patient. Gaining practical experiences during posting on the effect of labor on the pelvic floor and perineum, the duration of labour, Apgar score, Complications of labour: failure to progress, maternal and foetal distress, mal-presentation, prolapse or presentation of cord, hemorrhage (APH and PPh), contracted pelvis and cephalopelvic disproportion, The puerperium: Puerperium and its briefly activity, Complications in the puerperium: postpartum haemorrhage, venous thrombosis, pulmonary embolism, gravitational oedema, fistulas and other relevant experiences.

PST 410: Sports and Recreational Physiotherapy (2 Credit units)
The physiotherapist in a sport setting – relationship with athletes, coaches, other members of the hearth team and other workers. Prevention of sports injuries-health education and athletes and coaches assessment of athletes fitness – cardiopulmonary fitness, motor skill, anthropometric evaluation etc. Common injuries in different sports. Physical management of sports injuries to facilitate quick recovery.

PST 412: Evidence-Based Physiotherapy Practice (2 Credit units)
Designed to develop essential skills for conducting evidence-based practice from (1) experience from clinical practice, (2) patient values and goals, and(3) the evidence that comes from the research literature. Learn skills combining the sources of evidence into effective and efficient physical therapy. Formulation of answerable clinical questions, search relevant research literature and analyze the validity of the outcomes reported in these studies. Search literature addressing clinical issues of intervention, diagnosis and prognosis.

ANT 408: Functional Neuroanatomy (2 Credit units)
The brain-surface anatomy and major divisions of cranial nerves, meninges and cerebral vessels. The brain stem acid it stem and its centres and connections. Anatomy of circulation and of the cerebrospinal fluid.

PST 414:Clinical Posting in Women's Health (3 Credit units)
Students will be exposed to instructing women before and after child birth in appropriate exercises. Students will also be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients with obstetrics and gynaecological problems. Students will also be exposed to the appropriate ways of communicating treatment goals and plans to the patient. Gaining practical experiences during posting on the effect of labor on the pelvic floor and perineum, the duration of labour, Apgar score, Complications of labour: failure to progress, maternal and foetal distress, mal-presentation, prolapse or presentation of cord, hemorrhage (APH and PPh), contracted pelvis and cephalopelvic disproportion, The puerperium: Puerperium and its briefly activity, Complications in the puerperium: postpartum haemorrhage, venous thrombosis, pulmonary embolism, gravitational oedema, fistulas and other relevant experiences. Students will be examined and externally moderated at the end of the session.

PST 416: Clinical Posting in Community & Primary Health Physiotherapy (3 Credit units)
At the end of the posting, students should be able to take history, carry out physical examination and other relevant assessment procedures on patients requiring physiotherapy at the primary healthcare centres. Demonstrate skills in preparing and providing health educational talks at the community level. Demonstrate skills in communicating healthcare issues related to physiotherapy and plans with patients to adopt healthy lifestyles. Demonstrate skills in providing preventive, health promotion, rehabilitation and quality of life improvement strategy at the community level. Students will be exposed to routines and activities at the primary healthcare centres, disability and advocacy for the rights of persons living with disability, develop a strategy for community development as part of community

based rehabilitation services. Students will be examined and externally moderated at the end of the session.

500 LEVEL COURSES

PST 501: Neurophysiotherapy I (3 Credit units)
Review of neuroanatomy and neurophysiology. Assessment, evaluation and treatment of neurological and neuromuscular disorders among which are: stroke, Parkinson's disease, head injury, tumour, paraplegia, quadriplegia, tabes dorsals, disseminated sclerosis, syringomyelia, spinal meningitis, meningocele, adult poliomyelitis, Guillain , brain syndrome, encephalitis lethargica, peripheral nerve disorders, causalgia, neuralgia, huntingtons disease, motor neurone disease eg progressive muscular dystrophy and progressive bulbar palsy and amyotrophic lateral sclerosis. Other infant motor disorders – spinal bifida, mental retardation (Down's syndrome), autism, Minimal brain dysfunction.

PST 503: Systems review and screening (3 Credit units)
Process for making treat/refer decisions and consultations, review of aspects of patients' screening for disease and identifying appropriate referral patterns based on evaluation. Medical tests and procedure used to identify pathology and impairments. Patient/client management model. System review and evaluation. Physical Assessment, focusing on;
Musculoskeletal Cases; Application of the Physiotherapy patient/client management process; Physiotherapist as consultant and for the physiotherapist requesting consultation will be emphasized for examination, diagnosis and prognosis using evidence based practice in selected musculoskeletal cases.
Neurological Cases; Application of the Physiotherapy patient/client management process for examination, diagnosis and prognosis using evidence based practice in selected neurological cases.
Cardiorespiratory Cases; Application of the Physiotherapy patient/client management process for examination, diagnosis and prognosis using evidence based practice in selected cardiovascular and cardiopulmonary cases.
Metabolic and Integumentary Cases; Application of the Physiotherapy patient/client management process for examination, diagnosis and prognosis using evidence based practice in selected metabolic and integumentary cases.
Chronic Pain Cases; Application of the Physiotherapy patient/client management process for examination, diagnosis and prognosis using evidence based practice in selected chronic pain cases.
Differential diagnoses of possible pathological conditions that could require referral to other members of the health team. Emphasis on the differential diagnostic process in physiotherapy and indications for referral. An overview and introduction to laboratory safety. Basic skills used in specimen processing and laboratory information systems, urinalysis, hematology, chemistry, immunology, immune-haematology, and microbiology and phlebotomy. Universal precautions and proper procedures with regards to specimen processing. Laboratory mathematics, quality control, and the proper use of instrumentation as used in the clinical laboratory and laboratory science areas.

PST 505: Physiotherapy in Health Promotion (2 Credit units)
Introduction to the theory and practice of health promotion. Multidisciplinary approach to health promotion- roles of physiotherapists. Models of health promotion, health behavior theories. Barriers and enhancers of health promotion. Analysis and evaluation of health promotion; lifestyle behavioral modifications. Health promotion policy and implementation. Health promotion policy, current context. Ottawa charter, key debates and terms, evidence for promotion of health. Ethics and planning models, audience segmentation. Social and psychological factors in health promotion. Determinants of health, health inequalities and equity. Precede-proceed (community tool). Changing behavior theories, models and methods. Environmental hazards and risk management. Health promotion in various chronic diseases (Hypertension, Diabetes, Dyslipidaemia etc.). Community based rehabilitation matrix. Exercising with multiple morbidities. Gut-brain axis; iron knowledge translation, aging population and health (applicable to our culture and environment). Health promotion in the work place.

PST 507: Assistive Technology in Rehabilitation (2 Credit units)
Assistive technology used in therapeutic environments. Ergonomics and work station arrangement, hierarchy of access and switch access, adaptive software/interfaces/augmentative communication. Assistive technology for those with communication, hearing, cognitive and other deficits. Home environmental control systems, accessibility in homes and works. Seating systems, assistive technology for mobility and transportation. Funding assistive technology. An appraisal of the different assistive devices: techniques, methods of fabrication and application of these devices. Different types of orthotic and prosthetic devices for correcting or assisting specific problems. Biomechanical principles in prescribing prosthesis, orthosis, basis and criteria for selection. Physiotherapy in amputee rehabilitation. Patient's education on care, maintenance and uses of Orthosis and prosthesis. Dangers, complications and contraindications in use of the different assistive/corrective devices. Care, uses and prescription of wheelchairs and other assistive devices for activities of daily living e.g. walking aids.

PST 509: Biostatistics (2 Credit units)
The central role of statistics in medicine, types of variables; scales for measuring variables; collection of data; routinely and specially collected data; concepts of sampling. Reduction and summarization of data; the frequency table; measure of central tendency/dispersion. Presentation of data; numeric presentation of data-frequency distribution and summary tables; graphic presentation of data-the histogram, the frequency PolyGram, the kite diagram, bar diagram, the pie chart; abuse of diagram. Probability: experiments, simple and compound events, equiprobability, the proportion law, the addition and multiplication law, the binomial distribution of probabilities. The normal distribution: Importance of the normal distribution, the equation of the normal distribution, the normal distribution table. Sampling methods: Universe, sample; different sampling methods, distribution of samples means, confidence intervals. Descriptive and inferential statistics, parametric and non-parametric data. Test of hypothesis: difference between two means, two proportions, paired observations, tests of observations (Student t-test, independent t-test ANOVA, Chi-Square).

PAT 501: Pathology II (2 Credit units)
Systemic pathology: pathology of diseases of the central nervous system, cardiovascular system, respiratory system, musculoskeletal system and endocrine system. Role of physiotherapy in the moderation of these pathologies.

PST 511: Physiotherapy in Respiratory Disorders (2 Credit units)
Overview of respiratory system, management of patients with respiratory conditions using problem oriented medical system. Subjective assessment-breathlessness, wheeze, cough, sputum, objective assessment-auscultation, spirometry, chest shapes and movement, breathing pattern, chest radiography, blood gas analysis and implication for management. Principles of management and outcomes measure in respiratory care, physiotherapy techniques: active cycle of breathing, glossopharyngeal breathing, forced expiratory technique, manual hyperventilation, breathing control, airway clearance techniques and adjunct, non-invasive ventilation, basic life support. Management of specific respiratory conditions: COPD, asthma, bronchiectasis, pulmonary oedema, pulmonary tuberculosis, carcinomas, postsurgical conditions e.g. lobectomy, thoracotomy, pneumonectomy. Pulmonary rehabilitation and reconditioning, health education and promotion, smoking cessation, nutrition and other life style modifications. Paediatric respiratory care.

PST 513: Physiotherapy in Cardiovascular Disorders (2 credit units)
Review of basic physiological principles and dynamics of circulation; heart physiology and cardiac cycle. ECG – normal and abnormal. Clinical features, pathological basis, assessment and management of specific cardiovascular conditions e.g. thrombosis, embolism, thoracic outlet syndrome, congenital heart deformities, hypertensive heart disease, corpulmonale, congestive heart failure and heart attack, cardiac arrest, ischaemic heart disease, myocardial infarction; Principles of cardiac rehabilitation. Students will be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients who have had general surgery and those with cancer. Students will also be exposed to the appropriate ways of communicating treatment goals and plans to the patient

PST 515: Clinical Posting in Neurophysiotherapy (3 Credit units)
Learning outcomes: At the end of the posting, students should be able to:
a) Take history, carry out physical examination and other relevant assessment procedures on patients with medical and neurological conditions.
b) Demonstrate skills in clinical reasoning and in making clinical judgments in different medical and neurological conditions.
c) Demonstrate skills in communicating management plan and other information with patients.
d) Demonstrate skills in managing and evaluating patients with common medical and neurological conditions seen in physiotherapy.
Students will be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients with Stroke, Parkinson's disease, Diabetes mellitus, Gullian-Barre syndrome etc. Students will also be exposed to the appropriate ways of communicating treatment goals and plans to patients with

medical and neurological disorders as well as goal setting. Students will be examined and externally moderated at the end of the session.

PST 517:Clinical Posting in Cardiopulmonary Physiotherapy (3 Credit units)
Learning outcomes: At the end of the posting, students should be able to:
a) Take history, carry out physical examination and other relevant assessment procedures on patients with cardiopulmonary conditions.
b) Demonstrate skills in clinical reasoning and in making clinical judgments in different cardiopulmonary conditions.
c) Demonstrate skills in communicating management plan and other information with patients.
d) Demonstrate skills in managing and evaluating patients with common cardiopulmonary conditions seen in physiotherapy.
Students will be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients with cardiovascular and cardiopulmonary, cardiac and respiratory conditions. Students will also be exposed to the appropriate ways of communicating treatment goals and plans to patients with cardiopulmonary disorders as well as goal setting.

PST 502: Ergonomics & Occupational Health Physiotherapy (2 Credit units)
Definitions of work environment; appraisal of vocation; adaptations of machines and general conditions; normal/apparently healthy individual; psychologically/mentally handicapped individual. Human characteristics and work task. Open and closed systems. Accidents and safety in industry, the home and transportation, existing legislation; causes of accidents and prevention, heat stress and heat stroke. Assessment of physical, psychosocial and chemical abuses in industries.

PST 504: Professional Ethics And Jurisprudence II (2 Credit units)
Professional codes of ethics, privacy, confidentiality, whistle-blowing in practice, uses and abuses of human research, and animal ethics in research. Features of moral reasoning and providing case resolution method for dealing with ethical issues at work place. The course will cover in-depth those values central to moral life of physiotherapists: integrity, respect for persons, justice, compassion, beneficence and responsibility. MRTB code of conduct; MRTB code of professional practice; informed consent; gifts; conflict of interests and confidentiality.

PST 506: Paediatric Physiotherapy (3 Credit units)
Motor development during the first five years of life - important considerations in motor development (growth/maturation of the brain after birth, environment), sequence, principles of development. Introduction to motor control theories; reflex development and testing. Cerebral palsy – definition, aetiology, clinical features and classification, assessment, treatment approaches (Neuro developmental Therapy/Bobath's method). Spina Bifida. Mental retardation (Downs Syndrome). Autism. Acute flaccid paralysis – poliomyelitis, sciatic nerve injection palsy, Gullian Barre Syndrome. Brachial plexus injuries (Erb's palsy, Klumpke's paralysis, Duchenne - Klumpke's paralysis). Muscular dystrophies. Orthopaedic problems in childhood: - Congenital foot deformities, congenital hip dislocations, osteogenesis imperfecta,

torticolis, juvenile rheumatoid arthritis, muscular dystrophies. Cardiorespiratory disorders in children, e.g. cystic fibrosis, asthma and rheumatic fever.

PST 508: Pedagogy in Physiotherapy (2 Credit units)
Exploration of theoretical and practical issues with respect to educational methods, adult learning theories, instructional and evaluation methodologies, instructional technology and instructional management, which are pertinent to health care professions. Emphasis on adapting instruction to the learning needs of patient populations and health care providers. Clinical or community education strategies required by Physiotherapy students.

PST 510: Physiotherapy in Palliative Care (2 Credit units)
Philosophy of palliative care. Philosophical issues in palliative care; psychosocial issues; Ethical issues. Terminal illnesses (Cancer and staging, full blown AIDS); Common health problems in terminally ill patients - Pain syndromes, Gastrointestinal, respiratory, neurological and urinary symptoms. Specific health problems to specific conditions - Post mastectomy oedema in breast cancer, paraplegia in prostate cancer, swallowing problems in sub-mandibular cancer etc. Introduction to pain control; pain control in terminally ill patients; pharmacologic management of cancer pain; roles of radiotherapy, chemotherapy and surgery in palliation. Role of Physiotherapy in the care of terminally ill patients. Communication skills; Death and dying; Spiritual support; Bereavement. Palliative care organisations in Nigeria and Africa (e,g. Uganda)

PST 512: Administration and Management in Physiotherapy Practice (2 Credit units)
Introduction to health care system. Theory and practical application of managerial/supervisory principles. Topics include managerial structure and functions, development of and planning for organization operations, strategic planning, financial management, and documentation requirements for organizational operations, quality assessment, personnel selection and management, regulatory/business ethics, communication concerns, and strategies for change in the workplace, preparing to develop a private practice.

PST 514: Fundamentals of Pain & Management in Physiotherapy Practice (2 Credit units)
Definitions, Current understanding of mechanisms, Classification, Prevalence, Consequences and Cost of Pain. Measurement of pain – Unit and multi-dimensional tools and scales. Types of treatment – pharmacologic and non-pharmacologic. Pain modulation (Gate theory). Assessment and management of pain as a clinical entity. Pain is considered in all its ramifications; physical, pathological, emotional, social, psychological, financial, spiritual etc. The role of the physiotherapist in the holistic assessment and management of pain as a member of the pain clinic.

PHP 501s: Introduction to public health practice I (2 Credit units)
History: History of public health from antiquity to present times, the development and growth of public health from its inception are addressed. Also, the course traces the development of modern public health in Nigeria, that is, the development of health services and the basic health services to the development of the national primary health care system. Epidemiology,

Disease Control and Surveillance: The course discusses the scope and concepts of epidemiology, various methods of disease transmission, types of epidemiological survey and tools used, investigation of epidemics, methods of evaluating disease control, planning and implementation campaign programmes to control epidemic diseases, disease surveillance. Attention is focused on the historical contexts and developments, definition of terms and concepts, scope, uses, concepts of disease causation, measures of disease frequency, levels of preventions, types and methods of epidemiological investigations. Specific areas highlighted include the uses of epidemiology, epidemiology protocols and survey methods, epidemiology of communicable and non-communicable diseases, vital statistical and national health information systems, human ecology and disease processes, public health laboratory practices and methods, and intervention strategies in disease control and Surveillance. Students are expected to participate actively in disease control, surveillance, as well as in the monitoring and evaluation processes of selected endemic diseases at the national, state and local government operational levels. Applied Epidemiology (Communicable and Non-Communicable Diseases): The course teaches the concept of communicable diseases, aetiology, epidemiology and pre-disposing factors, clinical signs and symptoms of communicable diseases, treatment and preventive measures of communicable diseases. Principles and control of communicable diseases, concept of immunity and immunization in relation to communicable diseases. Identification of internationally modifiable diseases, procedure for reporting international modifiable diseases, concept of non-communicable diseases, aetiology, epidemiology of non-communicable diseases, causes and pre-disposing factors of non-communicable and chronic diseases, clinical signs and symptoms of non-communicable diseases, management and preventive measures for non-communicable diseases, role of individual, family, community, government and international agencies in the control of non-communicable diseases.

PST 516 : **Research Methodology (2 Credit units)**

Research in physiotherapy – focus in the 21st century. Types and nature of research, writing research proposal, formats for Seminar presentation. Research problems, research design & literature review. Data collection, storage & referencing styles. Population and samples, hypothesis & hypotheses testing. Reporting results of clinical research, presentation & interpretation of clinical research findings. Manuscript preparation for dissertation and journal publication. A minimum of 2 Seminar presentations in selected areas of specialisations in physiotherapy and in chosen area for final year project.

PST 518: Clinical Posting in Paediatrics (3 Credit units)

At the end of the posting, students should be able to:

a) Demonstrate skills in history taking and physical examination in paediatric disorders.

b) Demonstrate skills in analysing clinical data, setting of goals and identifying treatment outcomes for paediatric conditions.

c) Demonstrate skills in communicating management plan with parents/carers.

d) Demonstrate skills in managing paediatric conditions commonly seen in physiotherapy clinics.

Students will be exposed to history taking, physical examination, measurement of degree of disability, clinical judgments and management of children with cerebral palsy, infantile

brachial plexus injuries, spina bifida, acute flaccid paralysis, post immobilization stiffness, progressive muscular dystrophy, Down's syndrome etc. Students will be taught appropriate ways of communicating treatment goals, treatment plans, exercise home assignments and advice to parents/carers. Students will be examined and externally moderated at the end of the session.

600 LEVEL COURSES

PST 601: Clinical Out Postings (SIWES) (6 Credit units)
Clinical attachments provide an opportunity for the physiotherapy students to observe clinical practice and for them to familiarize themselves with the post training environment. The student will undergo a period of clinical attachment to a clinical unit with a qualified supervisor with the broad aims of gaining an appreciation of the nature of clinical practice. Attachments (out postings) should be for a period of six (6) months (i.e. 24 weeks) in the following areas: Homes/centres for the Elderly, Sports Physiotherapy, Private Physiotherapy Practice, Physiotherapy in Psychiatry, Homes/centres for children with special needs, Physiotherapy Practice in Industries or Industrial Clinics. A student must have satisfactorily completed the 24 weeks of clinical posting outside the teaching hospital environment under the Students' Industrial Work Experience Scheme (S.I.W.E.S) at the end of which a written report is submitted to the Department for assessment and subsequent grading.

PST 603: Clinical Measurement and Instrumentation (2 Credit units)
Definition of health measurement. Population and individual health statistics. Physiotherapy measurement and clinical decision – making. Outcomes assessment. Selection and integration of outcome measures into clinical practice. Development of clinical measuring instruments. Psychometric properties – validity, reliability and utility. Measurement of specific variables-vital signs, pain, disability, functional performance, anthropometric variables, physical fitness measurement (stress test), lung function tests, motor function tests.

PST 605: Intensive Care Physiotherapy (2 Credit units)
General principles of intensive care. Types of incisions, anaesthesia and the respiratory, circulatory and musculoskeletal systems. Pre-operative management and post-operative complications dues to anaesthesia. Intensive care of burnt patients. Care of unconscious patient and the critically ill patient.

PST 607: Integumentary Physiotherapy (2 Credit units)
Anatomy and physiology of the skin. Integument clinical tests, procedures and diagnostic tests. Wound conditions, thermal injuries, dermatologic diseases and disorders. Impaired circulation and anthropometric dimensions associated with Lymphatic system disorders. Interventions for wounds, burns, scars, peripheral vascular and lymphatic conditions. Specific skin conditions – acne vulgaris, boils, whitlows, carbuncles, psoriasis, alopaecia areata & totalis, vitiligo, eczema, leprosy, burn and post burns contractures. Wounds and scars – infections in open wounds, complication of infected wounds (e.g. tetanus) contractures, skin grafts, varicose ulcers, Buruli ulcers and pressure sores.

PST 609: Physiotherapy in Geriatrics (2 Credit units)
Definition of Geriatrics. Types of Aging process and associated changes: Muscles, Bones/Joints, Nervous System, Cardiovascular/Respiratory, Skin, etc. Developmental Theory of Ageing. Buhler theory. Peck's theory. David theory. Incontinence and Constipation in the Elderly. Hazards associated with the elderly. Assessment of the Elderly. Diseases common in the elderly; Cardiovascular, CNS, Pneumonia etc. Eye disease, Hearing disorders, Musculo-skeletal disorders, Fractures, Parkinsonism, Mental confusion and dementia. Care of the elderly and the role of physiotherapy in geriatrics.

PST 611: Neurophysiotherapy II (3 Credit units)
Psychiatry and psychiatric disorder, prevalence of psychiatric disorder, Classification of psychiatric disorder, Adjustment disorders and stress reactions, Depressive illness, Anxiety, Organic brain syndromes, Neurosis, Sexual disorder, Psychiatric aspects of physical illness, The psychoses, Schizophrenia, Psychotherapy and counseling, Psychological testing tools. Approaches to Neurorehabilitation. Principles of neurodevelopmental therapy (NDT) or Bobath's method. Sensorimotor Integration Therapy, Proprioceptive Neuromuscular Facilitation, Constraint Induced Therapy etc.

PST 613: Research Proposal Seminar (2 Credit units)
Students will present a seminar on their proposed topic of choice for the final project dissertation which will be graded by the departmental panel of examiners. A research proposal may be accepted or rejected based on the performance of the student as determined by the outcome of the presentation from the verdict (final average scores) given by the panel of examiners.

PST 602: Research Project (6 Credit units)
Principles of scientific method of investigations and their application to Physiotherapy in laboratory, clinical settings and on field. Research proposal, design, data collection, analysis and presentation. Submission of dissertation based on a selected research problem. The examination (viva-voce) of the research project shall be externally moderated.

PST 604: Physiotherapy Summative (General Clinical Practice) Postings (3 Credit units)
A rotational posting in each of Orthopaedics & Traumatology unit, Paediatrics unit, Medicine & Neurology unit, General & Cardiothoracic surgery and Oncology unit, Neurosurgery unit, Reconstructive surgery & Obstetrics and Gynaecology unit of Physiotherapy Department of the Teaching Hospital. Students will be examined and externally moderated at the end of the session.

PST 606: Specialty Postings (3 Credit units)
Students will undertake a two (2) week posting in each of the specialties covering:
Anaesthesia:
Definitions, history of anaesthesia, positioning the surgical patient, basic monitoring equipment: ECG, blood pressure, heart rate, ventilation, circulation, and oxygen therapy, the triad of anesthesia: unconsciousness, analgesia, and muscle relaxation, anaesthetics and types of anaesthesia, system specific sequele are of anaesthesia, anesthesia and nutrition, anesthesia

and endocrine disorders, AIDS and anaesthesia, sedation and suction, awareness or recall during anesthesia and the post anaesthetic effects.

Medical Social Services:

Social welfare policy and the policy-making process, historical and contemporary issues and their impact on the profession of social work and the institution of social welfare. Emphasis on policy analysis and the development of policy, practice skills from the perspective of physiotherapy. Relationships between social problems, social policies, social programs, social work practice and physiotherapy.

Plaster of Paris Casting units:

Students are to be taught the basics of making plaster of paris casts, materials needed, measurements, care of the cast, possible dangers and precautions. Students are to also undertake hands on experience in the process of making various plaster casts for various conditions.

Operation Theatre:

Definitions, Triage, Principles of basic and advanced life support, intensive care unit (ICU) personnel requirements, ratio of personnel to patients, types of ICU eg., special care baby unit (SCBU), renal care unit, accident and emergency unit, labor ward, burns unit, etc, ethics in the ICU, universally acceptable aseptic procedures, ICU equipment divided into; monitoring apparatus, maintenance apparatus, and therapy delivery apparatus, types of patients requiring specific apparatus and procedures, ICU situation e.g., unconsciousness, diabetes mellitus in crisis, sickle cell anaemia in crisis, cardiac disorders in crisis, tetanus, surgical conditions, pediatrics and neonatal conditions, shock, hemorrhage, adult respiratory distress syndrome etc., Definitions, history of anesthesia, positioning the surgical patient, basic monitoring equipment: ECG, blood pressure, heart rate, ventilation, circulation, and oxygen therapy, the triad of anesthesia: unconsciousness, analgesia, and muscle relaxation, anesthetics and types of anesthesia, system specific sequel are of anesthesia, anesthesia and nutrition, anesthesia and endocrine disorders, AIDS and anesthesia, sedation and suction, awareness or recall during anesthesia and the post anesthetic effects. Rotations in orthopedic, general, plastic, obstetrics and gynecology, and maxilofacial surgery.

Obstetrics and Gynaecology:

Students will be exposed to instructing women before and after child birth in appropriate exercises. Students will also be exposed to history taking, physical examination and specific assessment procedures and clinical judgments, treatment and evaluation of patients with gynaecological problems. Students will also be exposed to the appropriate ways of communicating treatment goals and plans to the patient.

PST 608: Physiotherapy in Disaster Management (2 Credit units)

Introduction to disasters, Definition of disaster, Types of disasters, Examples of disasters (earthquakes, tsunamis, floods, fire, war, rape, etc). Aspects of disaster management, Disaster prevention, Disaster preparedness, Disaster response / relieve, Disaster recovery. Introduction to different situations requiring emergency care, Complex emergencies. Physiotherapeutic intervention in different emergencies. Role of physiotherapy in disaster management, Disaster management guidelines – dos and don'ts. Basic Life Support skills- CPR, cardiac massage, bleeding control, etc. The physiotherapist as a member of the Emergency medical team. Management of injuries resulting from disaster. Rehabilitation of victims of disasters.

RAD 602: Medical Imaging and clinical interpretation (2 Credit units)
Methods of imaging the body, such as X-ray, MRI, CT Scan, and Doppler ultrasound will be presented. The content will provide a foundation for interpretation of pathology in the physical therapy management courses.

PHP 602: Introduction to public health practice II (2 Credit units)
Environmental Health/Occupational Health: Effects of environmental factors such as water, air, noise, biological, socio-cultural and socio-economic, on the health of the community, method of assessing these factors and steps taken to improve on the quality of the environment. urban and rural environments with particular emphasis on the housing problems; water and sanitation; refuse/solid wastes disposal and management; occupational health hazards; air and water pollution particularly in the riverine areas; the various agencies involved in environmental protection in relation to policies, laws, regulation codes and ordinances. Students choose specific topics of interest for project presentation at class seminars. Occupational Health and Safety: The course discusses the concepts of occupational health and safety, principles and components of occupational health, various hazards in the occupational environment, common occupational diseases and their prevention, appropriate hazard control measures in the work environment, carrying out a walk through inspection of an industry, and management of staff clinic. Various legislations concerning safety measures for the workers and work environments are reviewed. Community Reproductive and Adolescent Health: Concept of reproductive health rights including family planning, process of pregnancy including pre-natal and ante-natal care, and management of labour, care of mother and child during puerperium, demography and population dynamics, abortion and its complications, infertility, menopause and andropause, the "at risk" pregnant women for referral, adolescent sexuality and development process, adolescent reproductive health right, principles of adolescent and youth friendly services, importance of provision of youth friendly service, management of HIVS/AIDS and STI.

PST 610: Issues in Healthcare (Seminar) (2 Credit units)
A topic will be given to group of students to prepare a paper and present in form of seminar from the following healthcare issues: International Health definitions and classifications; ICF (Formally ICIDH;) determinants of health and health promotion; the Nigerian Health environment and policies; individual and population health statistics; evidence based decision making and practice; healthcare of selected population (women, children and the elderly). Ethical issues in general clinical practice; ethical issues in physiotherapy practice. National Council on Health, Universal Health Coverage, Public and private financing of health services and the National Health Insurance Authority, GIFSHIP. Cancers – Classification and common cancers in Nigeria, HIV/AIDS, COVID-19 Pandemic, Euthanasia.