SAINT MONICA UNIVERSITY HIGHER INSTITUTE



ACADEMIC CATALOG

(Programs)

THE SCHOOL OF HEALTH AND HUMAN SERVICES

ACADEMIC PROGRAMS

THE SCHOOL OF HEALTH AND HUMAN SERVICES

The School of Health and Human Services (SHHS) offers innovative courses that are delivered by highly skilled academic staff who are nationally and internationally recognized experts in their fields. Through a wide range of degree programs: Medical Laboratory Science, Nursing, Pharmacy Technology, Clinical Psychology and Physician Assistant, our commitment to excellence is demonstrated through our leading edge research and community partnerships to improve health outcomes both locally and globally. In addition, students benefit from learning opportunities that go beyond the classroom to include experiential education in a range of settings from laboratories to hospitals thanks to our community partners which include the best hospitals in the country.

The mission of the School of Health Sciences is to train people, skilled enough to be able to play major roles in emerging, re-emerging and new diseases (or health problems). The school also helps train people skilled enough in combating chronic diseases which has almost become an epidemic in our community. Our graduates are trained to be leading entrepreneurs but can find jobs in reputable sectors including: community care, diagnostic medicine, public health, environmental health, health promotion, medical research, medicine nursing, paramedicine, pharmacy, psychology and clinical counselling.

THE DEPARTMENT OF NURSING AND CLINICAL PSYCHOLOGY

- **1. Bachelor of Nursing Science**
- 2. Bachelor of Public Health
- 3. Master of Clinical Psychology
- 4. Master of Nursing Science
- 5. Master of Physician Assistant
- 6. Master of Public Health

PART ONE: UNDERGRADUATE PROGRAMS

Bachelor of Nursing Science

INTRODUCTION

Background of the Programme

The programme described in this document is as a result of the desire to train dynamic modern nurses.

It represents a major step forward in the ladder approach to career development

The program was drawn up taking into consideration the BMP system utilized by the University of Ministry of higher education Cameroon and the course credit system proposed by MINSUP

• Admission Requirements

- Five grade A-C Ordinary Level passes, with a pass in a science subject as an added advantage, and at least two Advanced Level passes in any subject excluding religion or Higher National Diploma (HND), Higher Professional Diploma(HPD), State Registered Nursing(SRN)
- Duration of Training
- Four year Bachelor of Nursing Sciences(BNS)
- Award Requirements
- A student must complete all courses within this programme to be awarded a BNS.

Key Elements of the Programme

Key elements of the programme are viewed to be the;

- Prolonged, early and regular exposure to practice placements from the outset of the programme to facilitate the integration of theory and practice.
- Value placed on a strong and early emphasis of the acquisition of nursing skills.
- Importance of a comparable and equitable assessment strategy that is valid and reliable.
- Use of an Enquiry Based Learning (EBL) approach.
- Focus of placements in Year 1 being upon the foundations of nursing practice, with Year 2 focussing on nursing care delivery and Year 3 & year 4 concentrating on managing nursing care.
- Recognition of the logistical problems created by student numbers and placement availability, and the need to find solutions that safeguard the quality of the practice learning experience.

Curriculum Development

The process followed during the development of this curriculum follows the situational analysis model (Figure 1) which identifies the External and Internal environmental factors that are to be considered. This model, based on previous work by Skilbeck (1984) and Marks-Maran (1986 cited by Beattie 1987), was chosen as it most closely reflected the approach used to identify the issues requiring inclusion.

Figure 1 - Situational Analysis Model

External	
Environment	
Analysis	

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Internal	
Environment	
Analysis	

Key factors to be considered when developing programme

Key Factors Identified by Situational Analysis

External Analysis - included the following:

- The impact of a period when nurse training was suspended.
- The expanding need for evidence-based nursing care in Cameroon.
- The requirement for the development of flexible, skilled practitioners able to respond to a changing healthcare environment.
- Lack of standardization in nurse training.
- The need to develop a nursing identity, so as to make a clear distinction between nursing and medicine.
- To develop nurses of a comparable standard to those in the United Kingdom, Europe and United States

Internal Analysis - included the following:

- The emphasis upon theory and practice should be equal.
- Practice based learning should be integral to courses of learning to
 - I. facilitate integration of theory and practice
 - II. provide opportunities for greater skill development
- The need for clearly defined course outlines, learning objectives and textbooks.
- The identification of clearly defined skills that each student will acquire by the end of the programme.

Following the identification of these key internal and external factors, the curriculum was planned to take them into account. The cyclical curriculum process can be described diagrammatically (Figure 2).

Figure 2 - Curriculum development process

Key factors identified by situational analysis	
\checkmark	 ↑
Courses of Learning determined	Evaluation
\checkmark	\wedge
Learning Outcomes identified	Operationalizing of
for each course	Curriculum
\checkmark	\wedge
Assessments created to test	Sequencing of
Learning Outcomes	Curriculum
<u> </u>	<u>^</u>
Learning opportunities selected	Content determined to reflect
to achieve Learning Outcomes	Learning Outcomes and
	Assessments
\rightarrow	

The Curriculum Model

Beattie (1987) suggests that although there are four broadly different approaches in structuring a curriculum, a more holistic curriculum could be achieved by adopting all four to create an eclectic model. Such a model maximises the strengths of each of the four approaches whilst at the same time negating their constraints. This section of the document now summaries the key aspects of each of the approaches, with a view of each as a component of the curriculum being proposed. In addition, this section will demonstrate the link between these components and the curriculum content.

The Curriculum as a Map of Key Subjects

This is the traditional approach to curriculum design with a curriculum being thought of as a syllabus. Despite its criticism, it is a useful feature as it enables curriculum planners and the

teachers who implement the curriculum to define and deliver the subject matter that underpins nursing theory and practice. Whilst the breadth of subject matter that a student has to master is ever increasing to meet the changing needs of patients or clients, the work of Henderson (1978) has been used to identify the key themes of this programme.

There are several core themes (listed below) that are incorporated within each course of study.

- Nursing theory and practice
- Physiology and allied subjects (microbiology, parasitology, biochemistry, virology, immunology)
- Pharmacology
- Psychology
- Sociology
- Healthcare law and ethics
- Research and evidence-based practice
- Health promotion and inequalities in health
- Diversity
- Preventing and managing aggression
- Moving and handling
- Nutrition
- Protecting the vulnerable individual
- Infection control
- Resuscitation
- Literacy and numeracy
- Personal and professional development

As there may be a tendency to see the above subjects as discrete entities, with students learning about each subject 'on its own', two strategies have been identified to minimise this. The first is the use of the Roper, Logan and Tierney model of nursing (Roper, Logan and Tierney, 1996). More detail on this model can be found in the Section below.

The second strategy is the use of an enquiry-based approach to learning, which aids the integration of the subjects listed above.

The Curriculum as a Schedule of Basic Skills

Closely associated with the approach of the 'key-subjects' to curricula design, is the approach that defines 'what the student will learn'. Whilst this approach has been seen as being restrictive to learning (prescription leading to restriction of learning; the focus on behavioural/technical elements and the need to develop outcomes that are explicit), the use of outcomes of learning has many other advantages. The two main advantages are that students have an insight into the expectations that a program has of them and, potential and future employers are able to know 'what a successful is capable of'. Secondly and just as importantly outcomes ensure that successful students have met the statutory requirements of the National Order of Nurses, Midwives and Health Technicians. This Order was significant when the program was being developed.

Although the vocabulary of end-points of a program is large and may appear contradictory, this program uses aims and outcomes. Both of these have been developed at the program level as well as at the individual course level. This dual level of aims and outcomes ensure that individual courses of study contribute to the whole program.

3 The Curriculum as a Portfolio of Meaningful Personal Experiences

With the growth of the humanistic approaches to learning came the view that individual students have a significant role to play in their own learning. Although the curriculum being proposed here places the patient/ client at the centre of learning and the learning activities are geared towards this aim, the significance of students as individuals should not be omitted. Placing students in a position of prominence in the curriculum also helps to deflect some of the limitations of the 'curriculum as a schedule of basic skills' by giving them some room for

manoeuvre to not only navigate their learning as well as giving them the opportunity to peruse subjects that are of personal interest to them.

In order to achieve this, a variety of strategies has been devised and will be implemented in this curriculum. Firstly, the teaching and learning strategy encourages active participation in learning. Secondly, a menu of the learning opportunities that are available in each of the placement areas will be made available to all students. Thirdly, the assessment strategy uses a portfolio of learning and achievement as one of the assessment tasks. Students will be encouraged to reflect on their personal experiences in a meaningful manner and document these in this portfolio. In addition, the students will be able to identify and pursue a subject area of their choice for their research proposal. In order to ensure that the students remain within the remit of the requirements of a proposal, they will work closely with a lecturer who will supervise the development of this proposal.

All of the above will ensure that students do not have a carte blanche approach to learning. A balance will be drawn between the freedom to learn and curricula requirements and the role of the lecturer here will be crucial in ensuring that students draw an appropriate balance between the two.

The Curriculum as an Agenda of Important Cultural Issues

The final component of the curriculum recognises that nursing practice and healthcare as a whole takes place within a society. The society has its own values and beliefs and healthcare policy is a feature of any political agenda and debate. This component also recognises that nurses are agents who can influence healthcare policy as well as being subject to these policies.

To this end, the proposed curriculum seeks to develop nurses who are culturally and politically aware. This awareness extends from the political agenda as it exists at the present as well as in the future. In order to achieve the latter, issues of ongoing and continuing learning will be addressed throughout the program in order to build the skills of self-direction and future personal development.

Conclusion

This integrated and holistic curricula, as presented in Figure 3 will be successful in developing nurses who meet the aims of the program as detailed in the Section below

Conceptual Framework of Nursing

The conceptual framework for the curriculum was devised from the programme philosophy, information gained from the situational analysis and application of the Fourfold Model of the Curriculum (Beattie, 1987).

The structure of the programme has been developed from the Roper, Logan and Tierney model of nursing (Roper, Logan and Tierney, 1996). Within this model the patient and their environment are placed centrally, which when supplemented by 4 approaches to care (systematic, system based, holistic and evidence based) and considered through 5 dimensions (politico-cultural, spiritual, physiological, social and psychological) with application throughout the life continuum from infant, through child, adult, and maternity, to older adult, provides a comprehensive representation of reality that has been translated into an effective curriculum framework (figure 4).

Using the 12 Activities of Daily Living integral to the Roper, Logan and Tierney model to form a structure hosting each individual course of study, in addition to an Enquiry-based learning approach enables all relevant aspects of nursing care, ranging from those at a fundamental level to the most complex, to be encompassed within the curriculum framework to produce effective learning from scenarios rooted in real life situations.

Such a curriculum design underpins the view of nursing as a profession which "encourages adaptation of individuals at all levels" (Subcommittee on Policy, 2007:8), and "render(s) holistic care" (Subcommittee on Education and Capacity Building, 2007:13) as these are

clearly reflected within the Roper, Logan and Tierney model with patients in a central position throughout their journey from dependency to independence.

Core Curriculum Beliefs and Values

The program is predicated on some key values and beliefs, which underpin the curriculum model and the teaching and learning strategies. Central to the curriculum is the recognition of the equal importance and emphasis on both the theoretical and the practice based aspects of the program, and their integration and application.

Another key value is that of recognising the abilities and life experiences that the individual students bring to the program, and his or her student group. Students are seen as partners in the education process and the programs role is to enable the student to develop confidence and competence in learning how to learn, and in becoming lifelong learners with a personal and professional investment in their own development.

Students are encouraged both to question and challenge appropriately, whilst demonstrating ability in searching for and critically appraising evidence to support effective care interventions. Supporting students in effective and proactive reflection, developing reflexivity and flexibility to respond to the changes and challenges of the care environment are also pivotal to the curriculum presented.

Nursing is viewed as the promotion, protection and optimization of health and ability; involving the autonomous and collaborative care of individuals of all ages, families, groups, and communities, whether they are ill or healthy, within a wide range of settings.

Nursing is defined as an applied science with a unique body of knowledge, based upon principles from the physical, biological and behavioural sciences. A registered nurse is therefore a highly trained and skilled professional and thus nursing is a professional health care service with a primary responsibility to provide direct health care and education to people in a wide range of circumstances. The profession of nursing is primarily based on an understanding of and respect for the individual. This is demonstrated by a commitment to provide care for individuals regardless of age, belief system, class, culture, disability, ethnicity or gender.

It is recognised that registered nurses' work with and care for both individuals and groups. Nursing can occur in any setting and at any stage of the life span of the individual. Such activities cover a broad spectrum, extending from health education through to multiple complex needs.

Nurses require the skills of decision-making and the ability to assess, plan, implement and evaluate care. The nurse is responsible for selecting appropriate care strategies and drawing together the various elements of care. Nurses have to be able to recognise the level of intervention necessary to meet patient/client needs. This role is unique, with registered nurses needing to make informed judgments and apply skills, which range from fundamental care through to a complex and complicated series of decisions and actions.

To achieve this role, nurses require a unique blend of disciplines to inform their practice. This mix of subjects, as well as the skills and expertise in specialist areas of practice, contribute to the art, science and craft of nursing. The registered nurse is often in a pivotal position in care situations and consequently other professions often rely on the registered nurse for information/co-ordination of patient/client care.

The nurse is likely to hold a more comprehensive picture of the patient/client needs and is best placed to be their advocate. The role of advocacy in nursing is one of assisting patients/clients in making informed decisions concerning their care. In addition to this, the advocate is in a position to speak on behalf of patients/clients unable to do so for themselves.

Crucial to the role of the nurse is their ability to act as a supporter for patients/clients/significant others during a time of physical and/or psychological crisis. To effectively fulfill this role the registered nurse needs not only to competently deliver evidence based holistic nursing care, but also to utilise their skills in teaching patients/clients strategies to adjust to an altered health status.

Such an all-encompassing role clearly places the registered nurse in a prime position, upon a local, national and potentially global scale, to act as an agent for change; introducing, promoting and leading innovations designed to improve patient care.

Thus, it is believed that nursing is a caring profession, within which skilled professionals deliver and manage holistic, innovative and evidence based care for a wide range of clients, facilitating their adaptation to altered health states. This view is fundamental to the concept of the nurse, which is integral to all aspects of this curriculum.

These core beliefs are presented diagrammatically below.

FIGURE 4



Philosophy of the Programme

This philosophy is grounded in the Core Curriculum Beliefs and Values

It is believed that all individuals have unique identities and needs that are deserving of respect. Such needs should be met by nursing care that is individualised and considers not only the whole person but also encompasses their family, friends and significant others.

The ability of the registered nurse to meet the patient/client's needs is paramount together with the ability to practice effectively to meet the changing health needs of the society. As a result the registered nurse must be competent to practice in both hospital and community settings.

Nursing care must be non-judgmental, based on widely accepted moral principles. The registered nurse must work in partnership with patients/clients and collaboratively with other healthcare professionals.

Effective communication is considered to be the foundation of a relationship which will ensure optimal use of the registered nurse's knowledge and skills and gain the patient/client understands of, co-operation with, and involvement in care.

Aims of the Programme

The aims of the programme are to enable the student to become a nurse who achieves the required academic and professional standard to become a confident registered nurse who is fit for practice, purpose and award; able to deliver, manage and develop an excellent standard of evidence-based nursing care; and capable of fulfilling, promoting and developing the role of the registered nurse within the healthcare tea

STRUCTURE OF BNS CURRICULUM IN SEMESTERS

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
ENG 102	Use of English I	3	30	0	0	30
CCE 100	Civic and Ethics	3	30	0	0	30
SET 201	Introduction to Science	3	20	0	10	30
SPT 100	Sport and Physical Education	2	0	0	20	20
BIO 202	Anatomy & Physiology I	6	40	20	0	60
NUS 201	Nursing Care I	6	40	0	20	60
NUS 203	Fundamentals of Nursing	6	40	0	20	60
NUS 205	Clinical Practice I (Medical nursing Intenshi)	6	40	0	20	60
	Total	35	240	20	90	310

FIRST SEMESTER: YEAR ONE

SECOND SEMESTER: YEAR ONE

Course Code	Course Title	Credit Value	L (contact)	T (guided study)	P (practice)	Total
MAT 210	Collage Algebra	3	20	10	0	30
ENG 102	Use of English II	3	20	10	0	30
BIO202	Anatomy and Physiology II	6	40	10	10	60
NUS 202	Nursing Care II	6	40	10	10	60
NUS 204	Nutrition and Human Health	6	40	10	10	60
NUS 206	Medical Sociology and Anthropology	6	40	10	10	60
NUS 208	Clinical practice (Surgical Nursing)	6	0	0	120	120
Total		36	210	60	160	480

FIRST SEMESTER: YEAR TWO

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
FRE 101	Functional French I	3	30	0	0	30
ICT 211	Introduction to	3	20	0	10	30
	Information and					
	Communication					
	Technology					
NUS 301	Paediatrics Nursing	6	40	10	10	60
NUS 303	Medico-Surgical Nursing I	6	40	10	10	60
NUS 305	Parasitology/ lab practice	3	20	0	10	30
NUS 307	First Aid / Traumatology/	6	40	10	10	60
	Emergency nursing					
NUS 309	Clinical Practice	6	0	0	120	120
	(Paediatrics internship)					
Total		33	190	30	170	480

SECOND SEMESTER: YEAR TWO

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
FRE 102	Functional French II	3	30	0	10	30
NUS 302	Midwifery/Obstetric &	6	40	10	10	60
	Gynaecological Nursing I					
NUS 304	Medico Surgical Nursing II	6	40	20	0	60
NUS 306	Health psychology	6	40	20	0	60
NUS 308	Infectious	6	40	20	0	60
	Diseases/Immunology					
BCH 202	Medical Biochemistry	3	20	10	0	30
MCB 204	Medical Microbiology	3	20	10	0	30
NUS 310	Clinical Practice (Surgical	6	0	0	120	120
	Nursing Internship)					
Total		39	230	90	140	460

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SEMESTER 1 YEAR THREE

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
NUS 401	Geriatrics Nursing	6	40	20	0	60
NUS 403	Midwifery/Obstetric &	6	60	10	10	60
	Gynaecological Nursing					
	II					
NUS 405	Public Health	6	40	20	0	60
NUS 407	Theatre/Intensive	6	40	0	20	60
	care/Anaesthesia					
NUS 409	Clinical Practice	6	0	0	120	120
	(Theatre/Intensive					
	care/Anaesthesia I)					
NUS411	Clinical Practice	6	0	0	120	120
	Reproductive Health					
	Internship (Obstetrics/					
	Gyaenacology)					
Total		36	120	25	275	420
SEMESTER	11 YEAR THREE					
Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
NUS 402	Mental Health and	6	40	10	10	60
	Psychiatric Nursing					
NUS 404	Clinical Pharmacology &	6	40	10	10	60
	Pharmacotherapeutics					
NUS 406	Research methodology	6	40	20	0	60
	and Biostatistics					
NUS 408	Health Management /	6	40	10	10	60
	Administration					
NUS 410	Clinical Practice	6	0	0	120	120
	Psychiatric Nursing					
NUS412	Clinical Practice	6	0	0	120	120
	Oncology					
Total		36	120	55	245	420

SEMESTER 1 YEAR FOUR

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
NUS 501	Research Proposal and	6	10	0	30	40
	Seminar Presentation					
NUS 503	Community Health	6	40	10	10	60
	Nursing					
NUS 505	Advanced Medico-	6	40	20	0	60
	Surgical Specialties					
NUS 507	Curriculum and	6	40	10	10	60
	Instruction in Nursing					
NUS 509	Clinical Practice	6	0	0	120	120
	Hemodialysis					
NUS 511	Clinical Practice Clinical	6	0	0	120	120
	Practice(Community					
	Internship)					
Total		36	140	45	295	375

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
ENT 400	Business &	3	20	0	10	30
	Entrepreneurship					
NUS 502	Family Health Nursing	6	40	20	0	60
NUS 504	Research Proposal	6		20	20	40
	Defense					
NUS 506	Clinical Practice medical.	12	0	0	240	240
	Pediatrics, maternity,					
	surgical wards					
NUS 598	Research Project	12	0	0	120	120
Total		36	50	20	370	375

SEMESTER 2 YEAR FOUR

TOTAL CREDITS=288 LECTURE HRS=1160 TUTORIAL HRS=440 PRACTICE HRS=1920

COURSE CONTENTS

1) Course Title: Anatomy & physiology I; code: BIO201 (6 credit value)

At the end of the course, students should be able to differentiate and know the relationship between cells, tissues, organs and systems. Also be able to identify and describe discuss all the systems of the human body.

<u>Content</u>: Structures, types, characteristics, functions, Membranes, mucous, sources and synovial fluids, glands, body cavities and their contents; systems i.e. circulatory hepatic, lymphatic, respiratory, digestive, urinary, reproductive, musculo-skeletal nervous system: special senses: the skin.

Details of the course

A. The Chemical Level of organization

- Cell, cell organelles and functions (organization of a typical cell)
- Movements through cell membranes: osmosis, filtration, diffusion, active transport, phagocytosis, and pinocytosis, cell life, and cell death.
- Nucleic acids and protein synthesis
- Introduction to genetics

B. Structure of Body Cells

- Life cycle of a cell: mitosis, meiosis
- Cell differentiation, control of cell reproduction, cancer, hyperplasia, anaplasia and metastasis

C. Structure of Body Tissues

- Types of tissues, their origins and functions.
- Biopsy, pathology and Martan syndrome
- Membranes and glands

D. Overview of Structure of Body Systems (blood, epithelial, muscular, cardiac etc).

- Life processes: responsiveness, growth, differentiation and reproduction
- Some systems of the body: integumentary, Osteology, urinary systemmuscular-skeletal, digestive, respiratory
 - A. Some systems of the body: Intergumentary, urinary, circulatory and immune system, musculo-skeletal and endocrine.

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B. Principles of Homeostasis

- Fluid, electrolyte, and acid base homeostasis
- Fluid compartment and fluid balance
- Intracellular and extracellular fluids
- Electrolytes in body fluids: sodium, chloride, potassium, magnesium, bicarbonate, calcium, phosphate
- Acid-base balance, buffer systems, exhalation of carbondioxide, kidney excretion of hydrogen ions, acidosis, alkalosis, regulation of fluid loss, enemas and fluid balance, body water

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

Course Title: Anatomy and Physiology II: BIO202 (6credits = 60HOURS Respiratory system

Structure and functions of respiratory organs

□ Physiology of respiration

Characteristics of normal respiration and its deviations

Digestive system

Structure and functions of organs of digestion and accessory organs

□ Process of digestion and absorption.

Detabolism: meaning and metabolism of food constituents

Excretory system

Structure and functions of organs of urinary system

□ Structure and functions of skin

□ Regulation of body temperature

□ Fluid and electrolyte balance

Nervous system

Type, structure and functions of neuron.

Central nervous system: structure and functions

Autonomic nervous system: structure and functions.

Sense organs

Structure and functions of eye, ear , nose and tongue.

□ Physiology of vision , hearing and equilibrium.

Reproductive system

 \Box Structure and functions of reproductive and accessory organs .

Process of reproduction, menstrual cycle and menopause

Reproductive health

□ Structure and functions of male reproductive system.

Note: Wherever possible related clinical application should be included in each unit

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: Nursing Care I COURSE CODE: NUS 201:CREDIT VALUE 6(60 HOURS)

At the end of the course, students should be able to differentiate, know and highlight the role of the nurse in managing problems associated with; the skin, cardiovascular system, muscular system and the digestive system.

<u>Content</u>: Diseases of respiratory alimentary, circulatory, nervous urinary and endocrine systems. Diseases of the liver, biliary tract and practices, blood disorders, some nutritional diseases like diabetes mellitus, neoplasms, diseases of the skin and appendages.

The content of this course will be grouped as follows;

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Cardiovascular Disorders and Patient Care

- Hypertensive disorders
- Heart failure
- Stroke
- Myocardial infarction
- Cardiac arrhythmias
- Coronary artery disease
- Rheumatic fever and rheumatic heart disease
- Infective endocarditis, pericarditis, myocarditis
- Arteriosclerosis/atherosclerosis
- Lymphadema/lymphagitis
- Cardiogenic shock

Vascular Problems and Patient Care

- Aneurism
- Varicose veins
- Arterial occlusive disease
- Thrombophlebitis/phlebothrombosis

Hematological Problems and Patient Care

- Anemia's: iron deficiency, pernicious, folic acid deficiency, aplastic and sickle cell anemia
- Bleeding/Hemorrhagic Disorders: types causes nursing care
- Hemophilia
- Disseminated intravascular coagulation
- Acute lymphocytic and acute myelogenous leukemia
- Polycythemia vera
- Hyperbilirubinaemia
- hyperlipidemia
- Degenerative blood disorders

Laboratory investigations for cardiovascular disorders

- Special cardiovascular test
- Electrocardiography
- Chest x-ray
- Exercise testing
- Cardiac catheterization
- Echography
- Cardiac enzyme assay
- WBC, RBC, Full blood count
- Throat cultures
- Fasting blood sugar
- Clothing time
- Serum analysis
- Blood grouping
- Prothrombin time
- Partial thromboplastin time

Drugs Used To Treat Cardiovascular System Problems

• Heart tonics, vasoconstrictors, vasodilators, hypotensives, ganglioplegics, antiarythmics, antianemics, haemostatics, anticoagulants, coagulation factors, plasma, blood platelets

Parenteral Drug Administration

- Procedure
- Dosage calculation

B. Skin Problems and Patient Care

- Inflammatory: dermatitis, pyodermatitis, myositis, boils
- Fungal: tinea versicolor
- Bacteria infections: impetigo, folliculate, furunculosis, carbuncles
- Others: acne, skin cancer, athletes foot, abscess,, anthrax, chancre, benign and malignant tumors
- Wounds: types, assessment, dressing, supporting and immobilizing, suturing, wound healing, kinds of wound drainage, complications of wound healing, factors affecting wound healing, supporting wound healing
- Burns: types, nursing care
- Pressure sores: causes, risk factors, stages of formation, prevention and nursing management

Diagnostic Test for dermatologic disorders

- Diascopy
- Microscopy immunoflorescence
- Photo testing
- T Zanick test
- Patch test
- Skin biopsy
- Blood cultures

Drugs Used In Treating Skin Problems

• Solutions, ointments, envelopes, antibiotics, anticancer therapy

- **Topical Drug Administration**
 - Procedure

•

• Dosage calculation

Personal hygiene

- Body: cleanliness, cloths, sports
- Mental: sleep, noise, drug addiction
- Environmental: housing, overcrowding, sewage and refuse
- Hospital: peculiarities of the hospital environment, nosocomial disease control
- Nursing Hygiene: the patent, the staff, building and furniture, nursing instruments
- Supporting a hygienic environment and preparing a patient's room

A. Digestive System Problems And Patient Care

Semiology: Anorexia, Vomiting, Pain, Transit Disorders, Hemorrhage, Ascities, Diarrhea, Constipation, Heartburn, Indigestion**Diseases**: Typhoid Fever, Parathyroid Dysentery, Cholera, Appendicitis, Peritonitis, Occlusions, Perforations, Gastroenteritis, Irritable Bowel Syndrome, Celiac Disease, Abscess and Fistulas,

Parasitic: Amoebic Dysentery, Intestinal Parasites, Hydatic Cyst

Inflammatory: Gastritis (Dyspepsia), Peptic Ulcers, Ulcerative Colitis, Diverticulosis and Diverticulitis, Gallbladder Disease/Gallstones, Crohn's Disease, Pancreatitis, Caustic Burns **Trauma**: Viscera Trauma, Perforations, Intestinal Obstruction, Hernia, Phimosis, Hemorrhoids,

Malignant: Colon Cancer

Assisting With Special Diets

- Stimulating appetite
- Assisting patients with eating
- Enteral nutrition
- Parenteral nutrition

Clinical pharmacology: vitamins, food supplements, fortifiers and rehydration salts

Test For Digestive System Problems

- Stool analysis
- Gastric analysis
- Peritoneal fluid analysis
- Abdominal x-ray
- Endoscopy
- Barium swallow

Drugs Used To Treat Disorders of The Digestive System

- Anti diarrheas, purgatives, laxatives, anti emetics, cholagogues, choleretics
- Administration of oral and sublingual drugs, and anal suppositories

Administration of Oral Drugs and Suppositories

- Procedure
- Dosage calculation

<u>Workload:</u> 6 hours per week for 1 semesters <u>Evaluation</u>: Test and end of internship examinations.

COURSE TITLE: Nursing Care II COURSE CODE: NUS 202:CREDIT VALUE 6(60HOURS)

At the end of the course, students should be able to differentiate, know and highlight the role of the nurse in managing problems associated with;; the respiratory system, urinary system, reproductive system and the muscular system.

<u>Content</u>: Diseases of respiratory alimentary, circulatory, nervous urinary and endocrine systems. Diseases of the liver, biliary tract and practices, blood disorders, some nutritional diseases like diabetes mellitus, neoplasms, diseases of the skin and appendages.

The content of this course will be grouped as follows;

<u>Objective</u>: At the end of the course, the student should be able to identify, discuss and manage surgical conditions in the systems of the body.

<u>Content</u>: Surgical conditions of gastrointestinal, urinary and circulatory systems. Infectious surgical conditions like gangrene, neoplasm, and malignancies. Hernias, surgical conditions of the spine and brain, bone surgery.

Respiratory System Problems And Patient Care

Semiology: Cough, Expectoration, Dyspnea, Cyanosis, Pain, Sweating

Diseases: Pneumonia, Pneumothorax, Tuberculosis, ,Respiratory failure, Lung abscess, Emphysema **Inflammatory:** Bronchitis Rhinitis, Pleuritis

Malignant: Lung cancer

Diagnostic Test for Respiratory Renal Disorders

- Chest X-Ray
- Sputum Analysis
- Pulmonary Function Test
- Lung Scan And Computed Tomography
- Arterial Blood Gas Analysis

Drugs Used To Treat Respiratory Disorders

• Cough mixtures, expectorants, bronchodilators, eupneics, asthmatic treatment

Administration of aerosols

Administration of Aerosols

- Procedure
- Dosage calculation

Renal System Problems And Patient Care

- Lower urinary tract infections
- Glumerulonephritis
- Acute renal failure
- Chronic renal failure
- Pyelonephritis
- Nephrolitiasis&urolithiasis
- Injuries to the kidneys
- Cystitis
- Cancer of the bladder
- Diabetes insipidus

Workload: 6 hours per week for 1 semester

Evaluation: Test and end of internship examinations.

Course Title: FUNDAMENTALS OF NURSING Code: NUS 203 (credit value 6) COURSE DESCRIPTION

This course is designed to help students develop an ability to meet the basic health need of the patients with regard to nursing care and develop skill in the competencies required for rendering effective patient care.

General Objectives

Upon completion of this course, the student will be able to:

- Describe the physical mental and social adjustment required of a sick individual and his family.
- Carry out basic nursing techniques and care with the application of sound scientific principles.
- Explain the concept of comprehensive nursing care.
- Develop skills in assessment, planning, implementation and evaluation of the nursing care rendered to the patients.
- Communicate effectively and establish good interpersonal relationship with the patients, their relatives and other health team members.
- Demonstrate skills in observation, recording and reporting.
- Recognize and utilize opportunities for planning and implementing need based health teaching programme(s) for individuals, groups, families and communities.

Course Content

This content can be structured into different parts as follows

- B. Overview of Historical Aspects of Nursing
 - The history of nursing
 - Current nursing practice current trends
 - Roles and functions of a nurse
 - Criteria of a profession
 - Nursing as a profession
 - Factors influencing current nursing practice in Cameroon and the world.
 - Nursing education: Cameroon; its evolution, nursing in UK, USA

C. Integral Aspects of Nursing

- Concept of Nursing, Man, Health illness and death
- Different phases of disease and different dimensions of treatment

- Cultural attitudes to health and diseases
- The Philosophy of nursing, the Nurse and Nursing Care
- Differences between Nursing Care and Medical Care, the role of Florence Nightingale.
- Characteristics of Care: Holistic, Continuous, Integrated Care
- Scientific Approach to Nursing Care
- The notion of basic needs: biological, physiological, psychological and sociological components of the different ages in life
- Human Needs According To Abraham Maslow and Virginia Henderson
- Conceptual Models of nursing
- Caring, Support, Dignity and Empathy in Nursing; the "nurse's touch".
- Confidentiality in Nursing

Scientific principles in Nursing will include: Theories in nursing, Definitions in Nursing, Nursing as an Art nursing as a science; Human need, and gratification; The hospital ward and its contents, reception of patients, patient lifting, care of the patient's environment, bed making, bed bath, Sitzs baths, process of admission of patient into the hospital, Nursing, interviewing, patient's records, vital signs, overview of drug administration, asepsis/aseptic techniques, care of the terminally ill. Last offices, oxygen administration, scientific principles, Concepts in Physiotherapy.

- Hygienic Needs and Physical needs
- - Importance of maintaining good personal and environmental hygiene in health and disease.
- - Nurse's role in maintaining good personal and environmental hygiene.
- - Care of Skin and Mucous Membrane.
- - Bed bath, care of hair, eyes, nose, ears, teeth, genitalia, hands and feet.
- Nutritional needs.
- - Importance of diet in health and disease, factors affecting the normal nutrition in sickness, nurse's role in maintaining good nutrition, feeding helpless patients, maintenance of intake and output record.
- Elimination needs
- - Problem in sickness: Constipation and diarrhea, retention and incontinence of urine.
- - Nurse's role in meeting elimination needs eg enema.
- Safety needs
- - Environmental hazards, role of nurses in prevention of health hazards.
- - Interpersonal relationship, cultural/spiritual/religious needs.
- Activity and Exercises
- - Importance of activity and exercise in health and sickness, active and passive exercise.
- - Process of admission of patient in to the hospital
- -Hospital wards and its content
- Physical Comforts
- - Comfort : meaning and its importance in health and disease, factors promoting and inhibiting physical comfort, comfort devices and their uses, body mechanics, positions use in nursing.
- Moving, shifting and Lifting of patient
- - Care of pressure points, bed sores: causes, signs, symptoms, prevention and nursing care
- - Shifting of patient from one side to another, from bed to wheel chair and bed to stretcher.
- Assessment of patient / Client
- - Principles and importance of assessment, methods of assessment: observation, palpation, auscultation, percussion, developing skill in observation.
- Physical Assessment
- - Height, weight, posture, speech
- Physiological Assessment

- - Temperature, pulse, respiration and blood pressure
- - Characteristics of normal and abnormal (T.P.R. and B.P.) and factors influencing the variations.
- -specimen collection;Urine stool, vomit, sputum, normal and abnormal behaviour and its deviation.
- Nursing Process

Workload: 6 hours per week (60hours per semester) Evaluation: Test and end of semester examination

Course Title: Civic and Ethics (Medical Law and Ethics) Code: CCE 100 (credits value3)

Objective: At the end of the course, the student should be able to know those values and obligations which are practised in the nursing profession.

<u>Content</u>: Nurse, Patient, nurse/patient relationship, nurse/nurse relationship obligations of the nurse, rights of the patient, rights and responsibilities of the nurse, deontology, ethics, etiquettes, patient reception in hospital, nurse/patient-relative relationship. Medical jurisprudence, nursing and the law, forensic nursing, malpractice, malpractice, civic duties, organization of Government, Common law, labour law, Criminal Law, etc.

Detailed Content:

Ethics for Nurses

- Morality and Ethics: Norms, Deviances, Religion, Values, Beliefs, Cultures
- Bioethics
- Nursing Ethics
- Moral Development
- Ethical Principles: Autonomy, Freedom, Privacy, Confidentiality, Beneficence, Fidelity, Motivation, Justice, Veracity and Responsibility and the "good Samaritan acts".
- Code of Ethics to Nurses: ANA Code of Ethics, Code of Ethics For Cameroonian Nursing Association
- Application of Ethics to Nursing Practice: Respect For Life And Death, The Concept Of Dignity, Euthanasia, Human Rights, Rights of The Child, Rights of The Elderly, Patients Rights
- Ethical Decision Making Frameworks and their Application In Patient Care
- Context And Conflicts With Bioethical Standards

Health Law for Nurses.

- Definition of Law, public law, private law
- The client's and Nurse's constitutional right
- Administrative law related to licensing and regulation of nursing practice
- Employee/employer contract law for nurses
- Nurses tort law

The Nurse as a patient advocate

Introduction to Law and Fundamental Rights

- 1. Law
 - Sources of law
 - Law and enabling Acts (text of application)
 - The concept of legal personality
 - Civil responsibility (contract, TORT)
 - Criminal responsibility
 - The court and their jurisdictions
 - Labor law: formation and execution of labor contract, remuneration, condition of work, obligation of the employer and employee, termination of labor contracts

Fundamental Rights

• The concepts of human rights

- Sources of human right
- Major international conventions of human rights
- International conventions relating to women
- Children and the rights of the minorities
- The role of the judiciary and the legislative in the protection of human rights
- The Cameroon national commission of human rights and liberties
- The civil society NGO's and the protection of human rights

Workload: 3 hours per week (30 hours per semester) **Evaluation**: Test and end of semester examination.

COURSE TITLE HUMAN NUTRITION AND RELATED PATHOLOGIES COURSE CODE

NUS 204 (6 credits =60hours)

Objectives: At the end of the course, the students should be able to understand the importance of nutrition to health, identify and discuss the various classes of food: identify and nurse patients with nutritional diseases.

Specific objectives

Upon completion of this course, the students will be able to:

 \Box Describe the principles of nutrition and dietetics and its relationship to the human body in health and disease.

Describe the common foods in health and disease.

□ Apply knowledge in the promotion of health and in the care of sick.

Demonstrate skills in selection, preparation and preservation of foods.

<u>Content:</u> Definitions and generalities, classification of food items (Protein, Carbohydrates, fats, vitamins, minerals, water, roughage) desirable weights and heights per age and sex, Nutritional requirements per age and sex, nutritional diseases, Nutrition in Pregnancy, Nutritional Disorders. **Detailed content**

A. Basics in nutrition

- Constituents of food
- Nutrients and classification of food
- Classification of food y origin(animal origin and vegetable origin)
- How the body uses nutrients
- Macronutrients: carbohydrates, fats, proteins
- Micronutrients: vitamins and mineral salts
- Water
- Desirable weight and height for age
- Nutritional requirement per age and status
- Healthy eating, balanced diet and food conservation
- Keeping food safe and clean (methods of food processing)
- Safe and unsafe food, food and water contamination
- Domestic water treatment
- Factors affecting nutrition
- Community nutrition: priority action, planning, follow-up, evaluation of actions take

E. Nutritional Problems and Patient Care

- Nutritional anemia
- Altered nutrition: over nutrition and related disorders (obesity, gout), malnutrition, (maraSMHI, kwashiorkor), undernutrition, rickets
- Avitaminosis
- Endemic goiter
- Tooth decay and gum disease
- Anorexia and bulimia nervosa
- Drug abuse, alcoholism and nutrition

- Stimulating appetite
- Assisting patients with eating
- Enteral nutrition
- Parenteral nutrition
- Clinical pharmacology: vitamins, food supplements, fortifiers and rehydration salts

Workload: 6 hours per week for one semester **Evaluation**: Test and end of semester examinations

Course Title: MEDICAL SOCIOLOGY/ANTHROPOLOGY; COURSE Code: NUS 206 (Credit value 6)

COURSE DESCRIPTION:

This course is designed to help the students gain knowledge and comprehend the importance of sociology and anthropology to the nursing profession in order to render effective nursing services

GENERAL OBJECTIVE

Upon completion of the course, the students will be able to relate the importance of sociology and anthropology to the nursing profession.

A. Sociology Specific Content

- Introduction to Sociology
- Notion of anthropology and ethnology
- Evolution of man and life: biological, psychological and social dimension
- Social institutions
- Social Behaviors
- Determinants of Behavior
- The in-born and acquired myths and beliefs
- Norms, Values, Beliefs and Belief Patterns In Relation to Heath
- Culture and cultural phenomena
- Cultural altitudes towards health, illness and death
- Present and alternative past medical practices and traditional medicine
- Sociology and social psychology; Society and stratification.
- Notions of groups: social groups, (families, working groups, institutions); restricted group dynamics; leaders; communication and communication networks
- Social Problems, their Importance to Public Health and their Implication for the Nurse
- B. Anthropology; Specific Content
- Definition and basics in anthropology (norms, beliefs and values) ethnology
- Cultures (nature, diversity and uniformity) in health options and marriages
- Influence of culture on health and diseases
- Folk beliefs and its impact on health
- Introduction to traditional medicine
- Medical pluralism, trends in medical pluralism
- Folk beliefs and its impact on health

Workload: 6 hours per week (60 hours per semester) Evaluation: Test and end of semester examination.

COURSE TITLE: COLLAGE ALGEBRA (APPLIED MATHEMATICS) (MAT 210) (3credit = 30hours)

Course Description

This course is a functional approach to algebra that incorporates the use of appropriate technology. Emphasis will be placed on the study of functions, and their graphs, inequalities, and linear, quadratic, piece-wise defined, rational, polynomial, exponential, and logarithmic functions. A graphical approach will be utilized throughout, with an emphasis on solving application problems.

Objectives

At the end of the course the Student should be able to use mathematical formulae in basic calculations. Also possess practical skills and fundamental concepts of measurement, units and dimensions, vectors, scalars and forces

Students will be able to represent business problems graphically for better understanding

Students will be able to represent and summarize business plans and profit margins in graphs for better, clear and distinct understanding.

Contents;

- Fractions, Statistics, percentages in conversion of liquids, drug doses and others statistics, percentages, volume and sets. Statistic elements: units, population, samples
- Statistic sources and statistic calculation
- The health information process
- Data collection, collection media, forwarding
- Treatment(counting, regrouping, presentation)
- Analysis and interpretation
- Feedback and decision making
- Mechanics and dynamics. Fundamental concepts of measurements, units and dimensions, vectors and scalars., rectilinear motion and Newton's laws of motion.
- Concepts of circular motion and simple harmonic motion and applications in centrifuge and tachometer
- Forces in equilibrium, moments and couples and its application in the beam balance, density and specific gravity concepts.
- Waves and optics
- Refraction at plane surfaces and through prism and application in microscopes. A general knowledge of the principle, use and maintenance of autoclaves, hot air ovens, inspissations, Koch's streamers, colorimeters, spectrophotometers, microscopes, common types of paraffin sections, centrifuges and stills.
- Applications of the following concepts in health
- Electrity and magnetism: electromagnetic spectrum;medical imaging
- Thermometry and design of thermometers
- Heat and its applications to autoclave and hot air ovens
- Radioactivity

Work load: 2 hours per week for semesters

Evaluation: Test and end of internship examinations.

<u>COURSE TITLE: FUNCTIONAL FRENCH I COURSE CODE: FRE 101 (3 CREDIT =30HOURS)</u>

Course Aim: Ce cours de "French" a pour but de former des locateurs compétents pour pouvoir faire face à des situations courantes de communication en maîtrisant les différents parametres de l'échange tels que le lieu, le temps, les interlocateurs, les statuts de locateurs, les affectivités etc. Il vise également à amener les apprenants à être capable de comprendre et de produire à l'oral comme à l'écrit, des énoncés en langue française sur des sujets variés touchant leur domaine de prédilection, dont la medicine.

Indicative Content:

- A. Introduction générale: apprendre ou ne pas apprendre le français? Pourquoi? Avantages et ouverture.
 - Saluer; se présenter quelqu'un
 - Demander une information; demander quelque chose, les sons [i], [j], [y], [w]; Demander une information, Proposer / acepter ou refuser une proposition; Demander une information; [m], [n], [], Donner son opinion
 - Exprimer ses préférences; les sons [p], [b]
 - Préciser son identité; les sons [i], [y]
 - S'excuser et se justifier; le son [r], [], Dire l'heure
 - Parler de soi; les sons [u], [i], [y]; les sons [], [a]
- B. Caractériser les lieux (ce qu'un voit)
- C. Caractériser des personnes (ce que l'on voit) Identifier et caratériser des personnes
- D. Savoir téléphoner; communiquer, les sons [e], [ɛ], [ə], [ø]
- E. Exprimer ses besoins et ses goûts, ses préférences et les justifier les sons [9], [k], [], [3]
- F. La négation; donner des orders; répondre à des orders.
- G. L'interrogation; proposer, accepter / refuser une idée les sons [s], [z], [t], [d],
- H. Medical French (medical terminologies in French)
- Work Load: 2 hours per week, 30 hours per semester

Evaluation: Continuous assessment and end of semester examinations

COURSE TITLE: SPORTS AND PHYSICAL EDUCATION CORSE CODE: SPT 100 Course Description

Physical fitness cannot be separated from mental fitness. Students would be exposed to all kinds of physical training and games that build up their physical competencies. Modern and Indigenous games shall be performed by students.

Objectives

A Makes students to keep physical fitness as crucial to health and mental fitness.

□ While recreating, students develop cognitive, social and personality skills from games.

<u>COURSE TITLE: PAEDIATRIC NURSING COURSE CODE: NUS 301 (6CREDITS= 60HOURS)</u>

<u>General Objective</u>: This course is designed to help the students develop and understanding of the concept of child health, the trends in child care and health problems of children. This will enable the students to meet the needs of the children, in health and sickness. At the end of the course, the students should be able to manage paediatric conditions both as emergencies level, ward situation and at home/community level.

Specific Objectives

Upon completion of this course, the students will be able to:

Explain the concept of child health, the principles underlying child care and trends in paediatric nursing.

 \Box Describe normal growth and development of children, so as to recognized eviation(s) form normal health.

Demonstrate skill in meeting the needs of the sick as well as health children.

Detailed Content

- Unit I Introduction
- - Concept in child health care.
- - Trends in paediatric nursing.
- - Role of paediatric nurse in child care.
- - Child care in Cameroon.
- - Emerging challenges, nursing process related to paediatric nursing
- - Concept of preventive paediatics.

- - Vital statistics.
- Unit II The Newborn
- A. Characteristics of New Born and Physiological status of the new born
- - Assessment of the new born: head to toe assessment (physical assessment), neurological assessment.
- - Nursing care of the normal/healthy new born including home care.
- - Breast feeding-concept of Baby friendly hospital initiative.
- B. Common health problems –medical and nursing management of:
- - Hyperbilirubinaemia, haemolytic disorder neonatal hypoglycaemia, sepsis, oral thrush, impetigo, erythema toxicum, hypothermia, neonatal convulsions.
- - Birth injuries; injuries of muscles and peripheral nerves, injuries of bones, sort tissue injury and injury of nervous system.
- C. High Risk New born
- - Definition : small for dates, Low birth weight
- - Common health problems of pre-term, post term and low birth weight infants and their nursing management.
- - High risk to new born of HIV positive mother, diabetic mother, its medical and nursing care.
- Unit III The Healthy Child
- - Growth and development: Definition, principles, factors affecting growth and development, techniques of assessment of growth and development, importance of learning about growth and development.
- The Infant
- - Growth and development during Infancy.
- Health Promotion during infancy
- - Nutrition counseling and weaning, immunization.
- - Safety and security including prevention of accidents, play and toys.
- The Toddler
- - Growth and development of Toddler.
- - Health promotion during toddler hood, nutrition counseling, toilet training, immunization, safety and prevention of accidents, guidance to parent on toddler's care, play and toys.
- The Pre-Schooler
- - Growth and development during pre-school years.
- - Health promotion during pre-school years, nutritional guidance, safety and security, day care centers/nursery school, play, role of parents in sex education of child.
- The School ager
- - Physical, psychological and moral development during school age years.
- - Health promotion during school years, nutritional guidance, sleep and rest, physical exercise and activity, dental health, sex education, play, role of parents in reproductive child health.
- The Adolescent
- - Physical changes, physiological and reproductive changes, reaction of adolescents to puberty.
- - Health promotion during adolescence.
- - Nutritional guidance, personal care, reproductive health / sex education, role of parents in health promotion of adolescents.
- Unit IV The Sick Child
- - Child's reaction to hospitalization.
- - Effects of hospitalization on the family of the child.
- - Role of nurse in helping child and family in coping with stress of hospitalization and illness.
- Nursing interventions adaptations in nursing care of sick child
- - Examination, principles of safety observed in paediatric techniques.
- - Preparation of child for diagnostic tests, collection of specimens.

- - Calculation and administration of oral and parenteral medications.
- - Procedures related to feeding: formula preparation, gavage, gastrostomy feeding.
- - Procedures related to elimination: enema, colostomy irrigation.
- - Use of play as nursing intervention.
- - Care of child in incubator.
- - Administration and analysis of oxygen concentration.
- - Surgical dressing
- - Immobilized child
- - Phototherapy.
- Unit V Behavioral Disorders and common Health Problems during
- Childhood, their prevention, Medical and Nursing Management.
- Infancy
- - Nutritional disturbances, allergies, dermatitis, vomiting, diarrhea, failure to thrive, resistance to feeding, colic anxiety.
- Early Childhood
- - Communicable diseases, poisoning, tonsillitis, otitis, media, urinary tract infections, diarrhea, child abuse, breath holding spells, bedwetting, thump sucking, nail biting, temper tantrums, masturbation.
- Middle Childhood
- - Helminthic infestations, common skin infections, animal and insect bites, stuttering, antisocial behaviour, enuresis.
- Later Childhood
- - Problems of puberatal development: precocious puberty, tall stature, gynaecomastia, acne, amenorrhoea, dysmenorrhoea, sexually transmitted diseases, accidents, sports injuries, juvenile delinquency, anorexia nervosa, obesity.
- Unit VI Children with congenital Defects / Mal formations
- - Etiology, signs, symptoms, complications, medical, surgical and nursing management of:
- - Malformations, of the central nervous system-cranial deformities, defects of spinal bifida, meningocele, hydrocephalus, cerebral palsy, neural tube closure.
- - Skeletal defects-cleft lip and palate.
- - Defects of Gastro-intestinal tract- Oesophageal atresia and distula, anorectal malformations, hernia, congenital hypertrophied pyloricstenosis.
- - Defects of Genitourinay tract
- – Hypospadiasis, epispadiasis, extrophy of bladder, phimosis, cryptrochidism, polycystic kidney, Sexual abnormalities
- – ambiguous genitalia, hermaphroditism.- Defects of cardio-vascular system Congenital heart diseases, majoracyanotic and cyanotic defects.
- - Orthopeadic Abnormalities Club foot, developmetal abnormalities of extremities.
- Unit VII Children with various disorders and diseases
- Etilogy, signs, symptoms, complications, prevention, medical, surgical and nursing management of :
- - Disturbances of fluid and electrolyte balance: imbalance, burns, disturbances of renal function, acute and chronic glomerulonephritis, acute and chronic renal failure.
- - Disturbed respiratory functions: Acute infections of upper and lower respiratory tract, acute inflammation of lungs.
- - Gastro-intestinal disorders: Malabsorption syndromes (celiac diseases)and obstructive disorders (intestinal obstruction, Hirschsprugn's disease) inflammatory conditions (appendicitis, Meckel's diverticulum's, ulcerative colitis), worm infestations.
- - Problems related to production and circulation of blood: Acquired heart diseases, congestive cardiac failure, infective endocarditis, rheumatic fever.

- - Problems related to the elements of blood: Anaemias, sickle cell anaemia, thalassemia, defects of haemostasis, haemophilia, Immune deficiency diseases, HIV infection (AIDS) leukemias, thrombocytopaenia, purpura.
- - Disturbances of regulatory mechanism: disturbances of cerebral functions altered state of consciousness, cranio- cerebral trauma.
- - Intracranial infections: Meningitis, encephalitis, convulsive disorders.
- - Endocrine dysfunctions: Disorder of pituitary functions, disorders of thyroid and parathyroid function, disorders of adrenal cortex, disorders of pancreatic hormone secretion.- Problems that interfere with locomotion: Poliomyelitis, osteomyelitis, kyphosis, lordosis and scoliosis, rheumatoid arthritis.
- - Children with development problems: Handicapped children, multiple handicapped children, mental retardation.
- - Communication disorders hearing, vision impairment, deaf and blind children.
- Unit VIII Welfare of Children
- - Child welfare services, agencies, balwadi, anganwadi, day care centers, midday meal programme.
- - Welfare of delinquent and destitute children.
- - Programme and policies for welfare of working children.
- - National child labour policy.
- - Child Act, Juvenile Justice Act.- Internationally accepted rights of the child.

Workload: 6 hours per week for one semester

Evaluation: Test and end of semester examinations

COURSE TITLE: MEDICO-SURGICAL NURSING I&II COURSE CODE: NUS303 NUS304 CREDIT 12(60HRS)

OBJECTIVES: to get students acquainted with Medical & surgical instruments

- to enable student prepare and care for a pre op and a post op patient
- to provide students with information and skills on how to care and manage wounds as well as fractures.
 - To know the complication of surgical wounds and how to manage them.
 - To enable students care for the sick adequately

CONTENT:

- Generalities of Surgery and Surgical Nursing
- Classification of operations
- Some problems faced in surgery
- How to stop pain and ally anxiety
- How to stop bleeding or minimise blood loss during or after operations
- How to prevent infections from the surgical wound.

SOME BASIC DEFINITIONS

- Types of wounds
- Type of wounds healing

PRINCIPLES OF PREOPERATIVE AND POST OPERATIVE CARE OF PATIENT.

- Pre-operative investigations
- Care in the immediate post operative period
- Care within the first 24hours
- Care within and after two days

COMPLICATION OF POST OPERATION

- Haemorrhage
- Infection of the operation wound
- Wound disruption
- Respiratory complication

INTRAVASCULAR THROMBOSIS

- Reception, Hospitalization and Observation of patient

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WOUNDS

- Surgical Dressing techniques
- Sources of wound infection
- Preparation of the dressing trolley
- Dressing procedure
- Some practical notions & procedures of Aseptic Techniques
- Stitches or Sutures
- Care of wounds with drains

COMPLICATION OF WOUNDS

- Nursing care of condition of joints
- Immobilisation in the management of fracture & trauma of joints.

TYPES OF BANDAGING

- Roles for applying roller bandaging splints.
- Types of splints
- Requirements for the application of splinting
- Procedure for the application of POP splint or Cast
- Nursing management following application of Pop cast (splint)
- Education of patient with POP cast
- The application of traction
- Methods(ways) of applying traction
- Principles of effective traction.

PRACTICAL CLASS

- Identification of surgical instruments.
- Bandaging practice
- Dressing (setting and review of procedure)
- Lifting of Pre and post operative patient
- Post operative bed making.

OUTCOME:

Students should be able to:

- manage various types of wounds
- care for pre and post operative care of patients.
- care for a surgical site
- maintain asepsis during wound care
- splint and bandage fractures as well as manage fractures students should be able to identify surgical instruments and their functions.

COURSE TITLE: PUBLIC HEALTH I; Code: NUS 405 (Credit value 6)

Objective: At the end of the course, student should be able to know and practice methods of healthy living, health promotion, and disease prevention. Should also be able to investigate and carryout public health activities like community surveys.

Contents:

Concepts of health and illness,

Definitions of health and illness, Concepts of hygiene like personal hygiene, environmental sanitations, environmental sources of disease e.g. nutritional worms, insects vectors, poisonous bits and stings, concepts of epidemiology, and biostatistics. Primary Health care (PHC) including reorientation Organisation of the public Health system in Cameroon and various conferences on PHC concepts. Village health committees. Public Health activities: housing, food hygiene, school health, occupational health, health education, water sanitation, essential drug supply, control of communicable disease, Quarantine, maternal and child health (MCH) immunization, occupational Health, etc.

Hygiene

- Personal hygiene
- Environmental hygiene
- Hospital hygiene
- Food hygiene
- Introduction to health and public health

Health and Development

- Public health notion; overview
- History and evolution of health care in Cameroon
- Stakes in health sector strategy
- Reorientation of primary health care:
- History and evolution of primary health care in Cameroon
- PHC-alma-at definition, components, and organization
- Lusaka conference, Bamako initiative (implication in Cameroon)
- Organization and functioning
- Health coverage
- Community health
- Health care financing
- Levels of health care: central, intermediate, and peripheral levels and their dialogue structures.
- The health district
- Integrated health centres and medicalised health centres
- Minimum package of activities of an integrated health centre (including CMAs) and a district hospital
- Principles of care in an integrated health centre
- Community involvement
- Co-financing, co-management
- Cost recovery
- Essential drugs and basic health package
- Health education; difference between health education and IEC

Prophylaxis

- Definition of prophylaxis
- Prophylactic measures
- Prophylactic declaration
- Early screening
- Isolation
- Quarantine
- Determination rate
- Destruction of insects
- Fight against snails
- Physical chemical and radioactive pollution control
- Chemoprophylaxis
- Vaccination/immunization
 - Definition and classification
 - Expanded program on immunization: origin, target population
 - Origin, target population, main vaccines, vulnerable groups
 - Vaccination strategies and vaccine reactions
 - Management of immunization activities
 - Planning, organization, supervision, evaluation of immunization coverage
 - Procurement and storage of vaccines/cold chain
 - Monitoring of immunized population and IEC

• Cameroon vaccination schedule: new born, pre-school age and adults

Health Promotion

- Definition
- Health promotional activities
- Benefits of health promotion
- The role of the nurse in health promotion

Occupational/school Health

- Aims
- Objectives
- Principles
- Strategies

Epidemiology

- Epidemiological triangle
- Definition of term: incidence, prevalence, morbidity, lethality, contagiousness, attack rate, level of alertness, primary and secondary alertness
- Epidemiological survey/Introduction to demography: birth rate, natural growth rate
- Epidemiology concepts: endemics, epidemics, endemo-epidermics, pandemics
- Demographic notion

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and semester examination

COURSE TITLE: MEDICAL BIOCHEMISTRY: Code: BCH 201 (Credit value 3)

<u>Objectives</u>: At the end of the course, the student should be able to use the knowledge of biochemical components and applications in any given nursing process or procedure.

<u>Content</u>: Atoms, compounds, hydrogen concentration (PH), body fluids including blood, fluid and electrolyte balance, Acid-base homeostasis, nutritional metabolism. Applied microbiology, Parasitology and haematology in biochemistry, Preparation and storage of stock solution, Conventional physical Chemistry, Dilution of solutions and concentrations and titrations, Osmosis and osmotic pressure.

COURSE TITLE: MEDICAL MICROBIOLOGY Code: MCH 201 (Credit value 3)

<u>Objectives</u>: At the end of the course, student should be able to define, identify and apply concepts in relation to disease causation and the immune response in nursing patients.

Content

Microbiology organisms in terms of species, class, genus and laboratory investigations of such organisms and diseases they cause. Parasites in terms of species, class, genus, family, diseases they cause and laboratory investigations.

<u>Workload:</u> 6 hours per week (60 hours per semester) <u>Evaluation:</u> Test and semester examination

Course Title: Functional English; Code: ENG 111(credits value 3) A. Title: Functional English Objectives:

Objectives:

Upon completion of the course, the students should efficiently communicate with his/her colleagues and the patient in English. Grammar, Conjugation, curriculum Vitae, Lettre writing, reading Comprehension, Listening comprehension. Tenses. Also, besides grammar, a special emphasis should be placed on common vocabulary in the medical work.

Contents:

Conversation in English language specific to the nursing environment, nursing care, IEC techniques. Translation of medical, scientific and technical terms, medical prescriptions, drugs information. Terms related to parts of the human body, names of equipment, instruments and hygiene.

- History and socio-cultural background of English in Cameroon
- Brief introduction to the structure of English
- Phoneme
- Morpheme
- Word
- Phrase
- Sentence
- Discourse
- Basic grammatic functionist
- Subject
- Object
- Grammatic categories: gender, personal number, count and non count nouns
- Spelling and punctuation
- Word formation
- Collocations
- Prepositions
- Some confusable works
- Synonyms, autonyms
- Figure of speech
- Idiomatic expressions
- Reported speech
- Difference between British and American English (pronunciation, grammar and vocabulary)
- Sound of English: in isolation and in connected speech
- Sentence stress and intonation
 - Types of discourse: expository, descriptive, narrative
 - Note taking (in lectures, in meetings)
 - Turn taking conversational English
 - Basic techniques of reading
 - Basic techniques of writing
 - Formal and informal letters
 - Application for a job
 - Administrative letters
 - Invitations
 - Writing CV
 - Writing minutes of meetings
 - General characteristics of the language in accordance with the area of specialization
 - Technical writhing
 - Writing technical report
 - Writing projects
 - Writing technical instructions
 - Summarizing documents
 - Techniques in public speaking
 - Techniques of negotiation

Work Load: 2 hours per week (30 hours per semester) **Evaluation**: Tests and end of semester examinations

Course Title: CLINICAL Pharmacology and Drug administration (6 credit = 60hrs) (NUS 404)

Course Aim: This course aims at enabling students to acquire knowledge on drug therapy, clinical calculation. At the end of the course, the student should be able to understand drugs and use them adequately to solve problems of patients both hospital and in the community.

Course Outcomes: By the end of this course, the student will be able to:

- Discuss the goals and responsibilities of nursing care related to drug therapy
- Discuss the difference between generic and trade names
- Differentiate between pharmacology and drug therapy
- Discuss the mechanism of drug actions
- Discuss the variables that affect drug action.
- Identify and explain the different routes of drug administration. Calculate drug dosages
- Discuss how the nursing process can be applied to drug therapy.
- Discuss the legal responsibilities of the nurse
- Discuss the basic principles for keeping drugs in hospitals.

Indicative Content:

A. General Introduction

- Definition of pharmacology and related terms
- Origin of drugs
- Definition of drug and drug therapy
- Forms of drugs: Different drug formulations; their advantages and disadvantages,
- Classification of drugs
- Routes of drug administration and Drug administration by advanced technique
- Common abbreviations and terminology of drug effects
- Modes of action and effects of drug
- Conservation/storage and monitoring of drugs
- Dosages
- Drug prescription and dispensing in hospital: Medication orders, preventing medication errors. Writing a medical prescription, recording drug administration
- Arrangement of drug cupboards
- Recognition of some common drugs
- Pharmacodynamics and pharmacokinetic elements: liberation, absorption, elimination, metabolism, interaction, side effects
- Drug regulation and distribution conditions
- Drug poisoning
- Goals and responsibility of nursing care related to drug therapy

B. Nursing Process in Drug Therapy

- Legal responsibilities of the nurse
- Unwanted effects of drugs
- Applying the nursing process in drug therapy
- General principles of drug therapy
- Basic principles for keeping drugs in hospitals

C. Specific Drugs and Handling Responsibilities of the Nurse

- Antibiotics, Sulphonamides, Steroids
- Infusions and transfusions, Diuretics, Digitalis
- Antimycobacterials, antiprotozoans, trypanosomicides, antiviral/retroviral drugs, antimycolytic drugs and antihelmintes
- Schitosomicides and filaricides
- Hormones, vitamins, infusion fluids
- •

DRUGS ACTING ON THE RESPIRATORY SYSTEM

- Cough suppressants
- Expectorants
- Anti-asthmatic drugs

DRUGS ACTING ON THE DIGESTIVE SYSTEM

- Peptic ulcer disease drugs.
- Antidiarrhoea drugs
- Laxatives
- Anti-emetics

DRUGS ACTING ON THE BILIARY SYSTEM

Cholagogues

DURGS ACTING ON THE CENTRAL NERVOUS SYSTEM

- Hypnotics/ sedatives
- Anxiolytics.
- General Anaesthetics
- Antisychotic drugs
- Anti depressant drugs.
- Central nervous system stimulants.
- Antiepileptics
- Drugs used in parkinsonism
- Drugs for dementia.

Drugs acting on the reproductory system Cancer chemotherapy and imunosuppresant

Drugs acting on the urinary system

Drugs acting on the musculoskeletal system

Hormones and hormunal disorders

Course Title: FIRST AID/ Traumatology and Emergency Nursing (6 credits = 60hours)(NUS 307)

<u>Objective</u>: At the end of the course, the students should be able to manage patients with traumatic conditions requiring emergency expertise.

<u>**Content</u>**: Traumatic inflammations, non traumatic inflammations, hemorrhage, wounds (classifications and healing), thrombosis, embolism, burn, scalds, drowning, cardiac/respiratory arrest, resuscitations, oxygen administration, intubations, colonic washout, catherization, lumber puncture, food poisoning, First Aid Resuccitation, transportation of casualties, mobilsation, sorting of casualties, electrocuition, shock, sprin, burns, insect bites and stings, etc..</u>

Detailed content

A). Emergency Nursing

- Importance of the recognition of the acutely ill client
- Basic approaches to emergency care and emergency assessment
- Organization of outpatient clinics
- Triage and psychological consideration in intensive care
- Equipments used in the ICU (Cardiovascular Monitors, Artificial Pacemaker, respiratory monitors, homodynamic monitor, gastro intestinal and neurologic monitors,
- ABCDE approach to patient assessment
- Resuscitation Basis Life Support.

Transportation of casualties and positioning in Nursing

- Methods For Transporting Casualties
- Different Positions In Nursing

B) Traumatology

- Hemorrhage
- Thrombosis and embolism
- Burns and scalds
- Head injuries
- Injuries to bones, joints and muscles (musculoskeletal injuries)
- Cervical spine injuries
- Maxillofacial injuries
- Soft tissues injuries
- Abdominal injuries

C) Principles of First Aid

First Aid in: Hemorrhage, fractures, sprains, burns, asphyxia, drowning, poisoning,

Insect bite and stings, heat stroke, frostbite, heat exhaustion and electrocution

D) Medico- Surgical Reanimation

Reanimation in: Barbiturate poisoning, Javel water poisoning, shock, cardiac arrest, Kerosene poisoning, insecticide poisoning, abdominal surgery, Nivaquine overdose, carbon monoxide poisoning and drug intoxication

E) Endocrine Emergencies

- Diabetic ketoacidosis
- Hypoglyceamic comma
- Acute and chronic renal failure

F) Cardiovascular Emergencies

- Cardiac treatment modalities cardiac pacing, defibrillation and cardioversion)
- Congestive heart failure
 - Accelerated hypertension

G) Neurologic Emergencies

H) Respiratory Emergencies

- Respiratory treatment modalities (Artificial airways)
- Respiratory failure foreign body airway obstruction
- Ventilation support
- Intermittent positive pressure breathing

I) Emergencies in Burns

- Emergency burn care
- Fluid resuscitation protocol
- Hydrotherapy

J. Blood Transfusion

- Overview Of Blood Homeostasis, Blood Groups, Blood Products And Derivatives
- Blood Collection Methods And Storage Of Blood Products
- Transfusion Techniques: Pre transfusion Checks, Products, Administration Of Blood, Blood Transfusion Safety
- Legal Provisions Related To Blood Transfusion
- Nurse's Responsibilities
- Organization Of A Blood Transfusion Centre

K. Drugs Used in Critical Care

Skills

- Basic life support
- Hemodialysis
- Peritoneal dialysis
- ECG interpretation
- Artificial respiration

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- Oxygen administration/therapy; definition, factors influencing, mode of administration, oxygen mask, oxygen tent, nasal route
- Intubation
- Tracheotomy
- Cardiac massage
- Central catheter
- Stomach enema
- Fluid volume restoration
- Psychological management of the family in intensive care units

Course Title: Midwifery/Obstetrics and Gynaecological Nursing I (NUS 302) (6 Credits= 60hours)

Course Aim: The aim of this course is to enhance the knowledge and understanding of the reproductive system and how sexuality influences the concept of self.

Course Outcomes: By the end of this course, the student will be able to:

- Demonstrate knowledge and understanding of the structure and function of the male and female reproductive systems
- Discuss the concept of human sexuality
- Recognise and demonstrate an understanding of the signs and symptoms that may occur in a person who has a reproductive disorder.
- Develop a plan of care, with a rationale for nursing actions for the care of a person who has a reproductive disorder.
- List and explain the laboratory investigations that can be used to diagnose reproductive system problems
- List and explain the various drugs that can be used to reproductive system problems

Indicative Content

A. Female Reproductive System.

1) Female Reproductive Anatomy and Physiology

- Organs of the female reproductive system
- Structure and functions the female reproductive system
- Female assessing reproductive organs
- Hormonal control of the female reproductive function
- Female sex hormones
- Menstrual cycle and menopause
- Developmental considerations

2) Female Reproductive System Assessment

3) Female Reproductive System Problems and Patient Care

- Disorders of Menstruation, leucorrhea, metrorrhagia, fetid smell
- Diseases of the vulva
- Diseases of the tubes Salpingitis
- Malignant neoplasm/tumors
- Breast problems: mastitis, abscess and cancer
- Infertility/sterility

B) Male Reproductive System.

- 1) Anatomy and physiology
 - Organs Of The Male Reproductive System
 - Testes And Decent
 - Structure And Formation Of Sperms
 - Male External Reproductive Organs
 - Erection, Orgasm, Ejaculation

- Hormonal Control Of The Male Reproductive Function
- Developmental considerations
- 2) Male Reproductive system Assessment
- 3) Male Reproductive System problems and patient care
 - Impotence/Infertility
 - BPH
 - Carcinoma of the penis
 - Prostatitis
 - Urethritis
 - Epididymitis
 - Prostrate Cancer

C) Sexually Transmitted infections and patient care

- Chlamydia
- Candidiasis / Trihomoniasis
- Gonorrhea
- Syphilis

D) HIV/AIDS and patient care

- History of HIV/AIDS
- Pathophysiology
- Treatment
- Nursing care management
- E) Constructing Sexuality and Sexual Identity

F) Laboratory Investigation Used to detect Reproductive systems problems

- Cultures
- Virginal smears
- G) Drugs used to treat Reproductive System Problems
 - Contraceptives, synthetic male and female hormones, antispasmodics, specific antibiotic

H. Genetics

- Definition
- Transmission of Hereditary traits and hereditary diseases

Gynecological Nursing

Course Content

Unit – I Introduction

- Definition related to gynecological nursing.
- Sexuality.
- Gynecological history taking, examination and investigations.

Unit – II Puberty

- Definition development of sex organs in females.
- Menstrual cycle.
- Disorders of menstruation: amenorrhoea, dysmenorrhoea, cryptomenorrhoea.

Unit – III Fertility and Infertility

Definition, causes both in male and female investigation and management.

Unit – IV Pelvic Infections

- Vulva: vulvitis, bartholinitis.
- Vagina: vaginitis, trichomonasvaginalis, moniliasis.
- Metritis, salpingitis, oopthoritis, pelvic abscess.
- Chronic infections, cervical erosion.

Unit – V Uterine Displacement and Descent

- Retroversion, retroflexion.
- Decent of the uterus : first degree, second degree, completed procedentia.

Unit - VI Sexually transmitted diseases and their prevention

- Syphilis, gonorrhoea, warts.
- Acquired Immuno Deficiency syndrome (AIDS) / HIV.

Unit – VII Breast Disorders

- Mastitis.
- Breast abscess.
- Tumours.
- Malignancy.

Unit - VIII Benign and Malignant Neoplasms of Reproductive organs

- Uterine polyps, uterine fibroids.
- Cancer : cervix, uterus.
- Ovarian cyst: benign, malignant.
- Cancer : chemotherapy, radiotherapy.
- Palliative care.

COURSE TITLE: IMMUNOLOGY/INFECTIOUS DISEASES (NUS 308) (6CREDITS = 60HOURS)

Immunology

- Immune system
- Types of immunity
- Problems of immunity and immune response

INFECTIOUS DISEASE

Objectives: At the end of the course, the student will able to identify and manage an infectious patient. CONTENT

- Urinary/Reproductive system(HIV/AIDS), and other sexually transmitted infections
- GIT system
- Respiratory system
- Circulatory system/blood(HIV/AIDS, emphasized)
- Chain of infection
- Control of infection
- Nursing in an infection unit(barrier nursing)
- Phobias following infections
- Complication of infections
- Infectious disease
- Parasitic diseases
- Venereal diseases

COURSE TITLE: PARASITOLOGY AND BASIC LABORATORY PRACTICE (NUS 305)(3CREDITS = 30HOURS)

Course Outcomes: By the end of this course, the student will be able to:

A: Microscopes

- Know the different types of microscopes
- Identify and name the different part of the microscope
- Give the uses of the different parts of the microscope.
- Handling and care of microscope
- Know various instruments

B: BASIC PRACTICE

- State common rules put in place in the laboratory
- Inoculation of culture media
- Staining and examination of slides
- Preparation and examination of smears.
- Sanitation of the laboratory
- Collection of specimen
- Preservation of specimen
- Reception of client in the laboratory

- Preparation for patients for X-ray, Ultra-sonography, ECG
- Identify various micro organisms

C: Parasitology

Parasites in terms of species, class, genus, family, diseases they cause and laboratory investigations

COURSE TITLE: INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY (ICT 211) (3credits = 30hours)

Course Aims: The aim of this course is to develop the student's ability to utilize Information Technology.

Content:

- Introduction and historical backgrounds
- Types of computers and application areas
- Impact of computers on society
- Current notions: e.g. information society and globalization
- Outline of computer organization (block structure of computers)
- Explanatory definition and examples of basic hard wares, software and networking
- Explanatory definition and procedures in using computers (e.g. business and data processing)
- The internet: internet access, use of internet facilities (emails, web page, access/download, file transfer)
- Information services: e-commence, assorted internet related protocols and standards e.g. http, ftp, html
- Office automation: introductory use of word processor, graphics and spread sheet packages, database assess
- Conceptual (abstract) view/layout of problem handled be given packages, optional packages: presentation graphics and graphics and graphing packages

COURSE TITLE: OBSTETRICS AND GYNECOLOGY II CORSE CODE NUS 403 (CREDIT VALUE: 6 = 60hours)

Course Description

- This course is designed to help students acquire knowledge and gain skills to meet the health needs of women during the period of pregnancy, labor and puerperium. The students will be able to identify different gynaelogical disorders and diseases and gain skills in proving nursing care to women suffering from these disorders and diseases.
- General Objectives
- Upon completion of this course the students will be able to:
- Describe the health needs of women in pregnancy, labour and puerperium.
- [Identify deviation(s) from normal pregnancy and take appropriate action.
- Demonstrate skills in providing ante partum, intrapartum and postpartum care to the new born.
- List different gynaecological problems and demonstrate skills in providing nursing care to women suffering from these disorders and diseases.
- Course Content
- Unit I Introduction
- - Definition, obstetrical nursing.
- - Scope.
- - Historical review.
- - Development of maternity services in Cameroon
- Unit II Reproductive system
- - Review of genitor-urinary system of male and female organs structure, physiology.

- - Menstrual cycle.
- - Internal and external organs of reproduction.
- - Female pelvis: structure, diameters and type.
- Unit III Embryology and foetal development
- - Ovum, sperm, maturation, fertilization and implantation.
- - Development of fertilized ovum, morula, blastocyst, embryo.
- - Development of pacenta: structure of full term placenta, functions and abnormalities, anatomical variations.
- - Formation of foetal sac, membranes, amnion and chorionand their functions.
- - Formation of liquor amni, its functions and abnormalities.
- - Development of umbilical cord: structure, functions and abnormalities.
- - Foetal skull: diameters, frontanelles, sutures and their importance.
- - Foetal circulation.
- Unit IV Nursing Management of Pregnant Women
- - Reproductive health.
- - Genetic counseling.
- - Physiological changes in pregnancy.
- - Diagnosis of pregnancy: history, signs and symptoms and
- investigations.
- - Influence of homones.
- - Prenatal care: objectives, history taking, calculation of expected date of delivery, routine examinations.
- - Health education: breast care, diet in pregnancy antenatal exercises.
- - Preparation for hospital/ home delivery.
- - Immunisation.
- - Minor disorders of pregnancy and its management.
- Unit V Nursing Management of women in Labour
- - Definition, stage and duration.
- - Causes of onset of labour.
- - True and false labour.
- A. First Stage of Labour
- - Signs of onset of labour.
- - Physiological changes in first stage of labour.
- - Management preparation of labour room.
- - Preparation of women in labour : Physical and psychological.
- - Equipments for normal delivery.
- - Care: physical, psychological, monitoring of maternal and foetal condition.
- - Vaginal examination; indication, articles, technique.
- B. Second Stage of Labour
- - Signs of second stage.
- - Mechanism of labour.
- - Monitoring of maternal and foetal condition.
- - Physical and psychological care.
- - Procedure for conduct of normal delivery.
- - Prevention of perineal tear.
- - Episiotomy, suturing and care.
- C. Third Stage of Labour
- - Signs, physiological changes.
- - Management : immediate baby care, technique of placental expulsion,
- monitoring maternal condition examination of placements and its

- membranes, blood loss.
- - Immediate postnatal care / fourth stage of labour.
- D. Conduct of Home Delivery
- Unit VI Nursing Management of Baby at birth
- - Assessment
- - Review of physiology of new born
- - Apgar scoring, examination for defects (head to foot examination)
- - Infant feeding: breast feeding, artificial feeding.
- - Care of skin, eyes, cord, buttocks.
- - Psychology and perception of new born.
- - Minor disorders of new born: birth marks, rashes, skin infections, sore buttocks, infections of eyes.
- - Jaundice of new born.
- - Major disorders: birth asphyxia, resuscitation measures, haemolytic disease (RH factor).
- - Infections and birth injuries.
- Unit VII Nursing management of Mother during puerperiu
- - Definition, objectives of care
- - Immediate postnatal care (care during 4th stage of labour)
- - Physiological changes during puerperium.
- - Psychosocial aspects of care.
- - Diet during puerperium.
- - Establishment of lactation and breast care.
- Perineal care.
- Postnatal exercises.
- - Postnatal examination, follow-up, family welfare.
- - Minor ailments and its management.
- Unit VIII Complications of pregnancy and its management
- - Bleeding in early pregnancy.
- - Bleeding in late pregnancy.
- - Pregnancy induced hypertension, pre-eclampsia, eclampsia.
- - Hydramnios, oligohydramnios.
- - Hydatidiform mole.
- - Pelvic inflammatory disease.
- - Intrauterine growth retardation, intrauterine death.
- - Post maturity.
- Unit IX High Risk pregnancy and its management
- - Concept, factors.
- - Anaemia, Jaundice, Viral infections.
- - Urinary tract infection, Heart Diseases, Diabetes Mellitus, Ostemalacia, Sexually Transmitted Diseases, AIDS.
- - Teenage pregnancy, Elderly primigravida, Multipara,
- - Multiple pregnancy.
- Unit X High Risk Labour and its management
- - Malpositions, Malpresentations: occipitoposterior position face, brow, shoulder and breech presentation.
- - Contracted pelvis: definition, causes, diagnosis, management and trial of labour.
- - Abnormal uterine action: hypotonic and hypertonic action, bandl's ring, contraction ring, precipitate labour.
- Cervical dystocia.

- Early rupture of membranes, prolonged labour, Induction of labour.
- - Obstructed labour rupture of uterus.
- - Obstetrical emergencies: cord presentation, cord prolapse, amniotic fluid embolism, obstetric shock.
- - Complications of third stage: post partumhaemorrhage, atonic uterus, retained placenta and membranes, inversion of uterus.
- Unit XI Complications of Puerperium and its management
- - Puerperal pyrexia, Puerperal sepsis, Thrombophlebitis, Embolis,
- Puerperal psychosis.
- - Mastitis, Breast abscess.
- Unit XII Obstetric operations
- - Manual removal of placenta.
- - Version : internal, external.
- - Forceps delivery.
- - Vacuum extraction.
- - Caesarean section.
- - Medical termination of pregnancy.
- - Laproscopic sterilization.
- - Embryotomy.
- Unit XIII Drugs used in obstetrics
- Unit XIV Ethical and legal aspects related to Midwifery and Gynecological Nursing.
- Clinical Experience
- - During this period of training each student shall.
- - Conduct thirty antenatal examinations.
- - Witness fifteen deliveries before conducting one herself.
- - Make five vaginal examinations.
- - Conduct twenty deliveries.
- - Perform and suture five episiotomies, five first degree tears.
- - Give post natal care to thirty lying-in-mothers and to their new born babies.
- - Carry out ten health teachings for antenatal and lactating mothers.

COURSE TITLE: HEALTH PSYCHOLOGY (COURSE CODE: NUS 306 CREDIT VALUE: 6 TOTAL HOURS: 60

Course Description

This course is designed to help students understand the dynamics of human behaviour and concept of mental health. This will enable them to develop positive attitude and good inter – personal relationships in the practice of nursing in all health care settings.

General objectives

Upon completion of this course the students will be able to:

Describe the concept of mental health and psychology.

Explain the dynamics of human behavior personality and learning.

Discuss the role of adjustment mechanisms and emotions in health and illness.

 \Box Demonstrate skills in the application of principle of psychology in nursing practice in all kinds of health care settings.

Course Content

Unit-I Introduction

- Definitions, scope of psychology and its importance in nursing profession.

Unit - II Psychology of Human Behaviour

- Dynamics of behaviour, motivation and behavioral process of adjustment, adjustments and mal - adjustments unconscious behaviour.

- Frustration: sources and nature of frustration, measures to overcome frustration.

- Conflicts: types, unconscious conflict, resolution, conflict and nursing.

- Adjustment Mechanism: meaning, types and importance

- Emotions : in health and disease, emotional situations, control of emotions, effect of emotional reactions on health.

- Attitudes: meaning, development, changes in attitude, attitude and nursing.

- Habits: formation, types, effective habit formation, advantages and disadvantage of habit formation.

- Main stages of life
- Developmental psychology
- The human body and body image
- Defense and adaptation mechanism
- Affective states: fear, feelings, emotions anger etc.
- Different type of relationship
- Nurse-patient relationship
- Psychology of the sick.

Unit-III Learning

- Nature of learning, laws and types of learning, factors promoting Effective learning, memory and forgetfulness.

- Thinking and type of thinking.

- Nature and type of thinking.
- Problem solving and reasoning.

Unit-IV Observation

- Attention and perception, factors affection attention and

Observation and errors in perception.

Unit-V Intelligence

- Definition, individual differences in intelligence.
- Mental ability and nature of intelligence
- Measurement of intelligence.
- Development of intelligent behaviour.

Unit-VI Personality development

- Meaning, Types, factors affecting development of personality
- Characteristics of various age group: Child, adolescent, adult and aged.

- Will and character.

COURSE TITLE: RESEARCH METHOD AND BIOSTATISTICS COURSE CODE NUS 406 CREDIT: 6 TOTAL HOURS: 60

Course Aim: The aim of this course is to develop the skills of nursing skills through exposure to research methodologies.

Course Outcomes: By the end of this course, the student will be able to:

- Demonstrate an understanding of a range of research methodologies
- Critically discuss a range of data collection methods
- Identify strategies to disseminate research findings

Indicative Content:

- Introduction to research
- Definitions: goals, types of research
- Research process
- Research methodologies qualitative
- Research methodologies quantitative
- Bibliographic research
- Topic choice and hypothesis
- Statement of problem, research questions, rationale for research
- Literature search
- Preparation for the collection of data
- Development of data collection tools

- Data collection and instruments
- Statistical analysis
- Presentation and discussion of results
- Conclusion and drafting of research project
- Oral presentation and thesis defense

A. Biostatistics

Health statistics Statistical document How to collect and register information Population, sample Measurement of central tendencies and variance

COURSE TITLE: GERIATRIC NURSING COURSE CODE: NUS 401 CREDITS 6 (60HRS)

Course Aim: The aim of this course is to appreciate the unique care needs of a person who is aging, dying and/or who is experiencing a loss

Course Outcomes: By the end of this course, the student will be able to:

- Appreciate the difference between the concepts of aging, loss, grief and adjustment in real life situations.
- Recognise the uniqueness of terminal and palliative care
- Explore the role of psychological support for patients and their families who are experiencing loss
- Plan and care for a geriatric client

Indicative Content

A. Geriatrics Specific Content

- Normal changes of aging: vision, hearing, smell, taste, organ/systems
- Theories of aging
- Legal and ethical issues related to aging and the aged
- Gerontological assessment; special considerations affecting assessment, the health history, the physical examination, laboratory data.
- Psychosocial assessment; altered mental status, social activities and support, emotional/affective status, motivation in the elderly.
- Cultural, family, socioeconomic and environmental influences on health and Illness
- Health maintenance in the elderly: Primary prevention; counseling, immunizations, Secondary prevention; screening recommendations,
- Tertiary prevention: Preventing complications of immobility; positioning, proper body alignment, therapeutic exercises; Geriatric rehabilitation and restorative care; characteristics, nursing and patient care considerations, and community and home care considerations.
- Over View of Some Geriatric Conditions: urinary incontinence, Urinary retention, Fecal incontinence, Pressure sores, Osteoporosis, Alzheimer's disease;
- Sleep and activity, intimacy and sexuality
- Cardiac disorders of the older adult
- Vascular disorders of the older adult
- Renal and urinary problems of the older adult
- Ophthalmologic and integumentary problems of the older adult.
- Cancer: epidemiology, risk factors, signs and symptoms, cancerous diseases, main forms of cancer, palliative care for patients at terminal phase, chemotherapy, anti-inflammatory drugs, pain management, opiate analgesics corticoids and nursing care management
- Drug therapy in older adult

B. Theories of Loss, Grief and Adjustment.

C. The Process of Death and Dying

D. End of life care.

E. Caring for the bereaved. F. Spiritual care.

COURSE TITLE: PSYCHIATRY/MENTAL HEALTH COURSE CODE: NUS 402 CREDIT 6(60HRS)

Course Aim: This course is designed to help students develop the concept of mental health and mental illness, its causes, symptoms, prevention, treatment modalities and nursing management of mentally ill, to examine the principles of patient education in nursing care, and explore communication in mental health nursing and strategies in stress management

Objectives

By the end of the course students will be able to:

Describe the concept of mental health and mental illness and the emerging trends in psychiatric nursing.

Explain the causes and factors of mental illness, its prevention and control.

Identity the symptoms and dynamics of abnormal human behavior in comparison with normal human behavior

Demonstrate a desirable attitude and skills in rendering comprehensive nursing care to the mentally ill.

Describe how to apply communication skills in psychiatric consultation and psychoanalysis

Analyze the principles of initiating, maintaining and terminating a therapeutic relationship effectively

Course content

Unit – I Introduction

Definition of mental health and mental illness

Definition of terms used in psychiatry.

Review of mental mechanisms (ego mechanisms).

History of psychiatric nursing

Trends in psychiatric nursing

Detailed content

- Principles of growth and development
- Erickson's developmental stages, Piaget's stages of cognitive development, Kohlberg's theory of moral development, Maslow's hierarchy of needs
- Definition of mental health and mental health alteration, Current attitudes and sociocultural influences on mental health
- Data collection and diagnostic tests for a client with mental health alteration, Patient's rights as they relate to the client with mental health alterations
- Ethical and legal concerns as they relate to assessment of mental health issues,
- Disorders usually first evident in infancy, childhood or adolescence.
- Autistic disorder, Attention-deficit hyperactivity disorder, Conduct disorders
- Eating disorders, Sleep pattern disturbance, Elimination disorders (bed wetting)
- Anxiety disorder, Etiology, Manifestations, Intervention, Nurse's reaction to anxious patients
- Fear/Phobia, Defense mechanisms, Specific phobias, Management
- Stress; Stress and stressors, Psychopathology, Nursing care for the client with stress.
- Somatoform disorders, Conversion disorder, Pain disorder, Hypochondriasis, Treatment and nursing care
- Mood disorders; Depressive disorders, Bipolar disorders
- Suicide, Nursing management
- Schizophrenia; Sub-types, Characteristics, Concepts and principles, Nursing approaches
- Delusions/illusions, Hallucinations.
- Paranoid psychoses; Characteristics, Concepts and principles, Nursing approaches

- Personality disorders; Characteristics, Concepts and principles, Nursing approaches.
- Perversion, psychopathological and borderline states: various forms of perversion, professional and affective instability, character and behavior disorders (mythomania, kleptomania, pyromania, threatening behavior)
- Alcoholism; Definition, Causes, Characteristics, Drug therapy and rehabilitation program, nursing approaches to assessment and management
- Substance abuse; Causes, Characteristics, Management
- Neurotic disorder; Characteristics, Concepts and principles Nursing approaches
- Chronic brain syndrome (organic psychosis)
- Mental-health problems of the age
- Treatment modes; Crisis intervention, Milieu therapy, Behavior modification
- Activity therapy, Group/family therapy, Electroconvulsive therapy
- Psychopharmacology; Antipsychotics, Antidepressants, Antianxiety (tranquillisers), Antimanic, Anti-Parkinson drugs

Unit - III Mental Health Assessment and communication in nursing

Psychiatric history taking

Interview technique and mental status examination

Unit – IV Community Mental Health

Concept, importance and scope

Attitude and misconception towards mentally ill

Prevention of mental illness (preventive psychiatry) during childhood,

adolescence, adulthood and old age.

Community mental health services.

□ Role of nurses in community mental health services.

Unit – V Psychiatric Nursing Management

Definition of psychiatric nursing.

□ Principles of psychiatric nursing.

 \Box Nursing process.

□ Role of nurses in providing psychiatric nursing care.

□ Therapeutic nurse-patient relationship.

Communication skills.

Unit – VI Mental disorders and Nursing Interventions.

Etioloy- various etiological theories (genetics, biochemical, psychological, etc.)

Classification of mental disorders.

Organic mental disorders- Acuter brain syndrome.

Chronic brain syndrome.

Functional Mental Disorders

□ Prevalence, etiology, signs and symptoms, prognosis, medical and nursing management.

Schizophrenic disorders.

□ Mood (affective) disorders.

□ Manic depressive psychosis.

Anxiety states.

Definition, etiology, signs, symptoms, medical and nursing management of:

Phoebic disorders, obsessive compulsive disorder, depressive neurosis, conversion

disorders, dissociative reaction, hypochondriasis, psychosomative disorders, alcohol,

drugs and other psychoactive substances abuse.

Unit – VII Bio-Psychosocial Therapies

Psychopharmacology

Definition, classification of drugs, antipsychotic, antidepressant, antimanic, antianxiety agents.

 \Box Role of nurses in psychopharmacology.

Psychosocial therapies

Definition of psychosocial therapies.

Types of therapies: individual and group therapy, behaviour therapy, occupational therapy.

 \Box Role of nurse in these therapies.

Somatic therapy

□ History, technique of electro-convulsion therapy (ECT), indications, contraindications.

□ Role of nurses before, during and after electroconvulsive therapy.

Unit – VIII Forensic Psychiatry / Legal Aspects.

Legal responsibilities in care of mentally sick patients

□ Procedure for admission and discharge from mental hospital, leave of absence.

□Mental Health Act 1987

□Narcotic Drugs and Psychotropic Act 1985

Unit - IX Psychiatric Emergencies and Crisis Intervention

□Over active patient

Destructive patient

□ Suicidal patient.

<u>COURSE TITLE: ADVANCED MEDICO-SURGICAL SPECIALTIESCOURSE CODE NUS</u> 505 (6 CREDITS = 60HOURS)

A. Ophthalmologic Nursing

- A&P of eye.
- Assessing the visual system
- Visual system problems and patient care: infectious (trachomea, onchocerciasis, chalazion, conjunctivitis), cataract, glaucoma, strabiSMHI, cornea lesions, sight disorders (myopia, astigmatism, presbety), injuries and foreign bodies in the eye

B. ENT Nursing

- A&P of ear.
- Assessing the auditory system.
- ENT system problems and patient care: otitis media, rhinitis, sinusitis, sore throat, diphtheria, mumps, foreign bodies, benign and malignant tumors, facial trauma

C. Dental Nursing

- Anatomy and physiology of the mouth and dentition
- Classification and development of teeth and anomalies of teeth eruption
- Dental formula
- Bacteria flora in the mouth
- Dental pathology: etiology of dental carries, paradontosis, paradontitis
- Dental hygiene
- Mandibular fracture and its management
- Luxation of the jaw bone
- Malformation and tumors
- Diseases of the pulp

D. Drugs used to treat disorders of the special senses

Eye drops, antiseptics, antibiotics, local anesthesia

- E) Radiology
 - broad generalities rays
 - radiological examination and diagnosis
 - Gastroduadental transit
 - Barium enema, Barium meal
 - Intravenous pyelography (I.V.P)
 - Hysterosalpingography (HSG)
 - Arteriography

- Cholecstography
- Electrotherapy
 - Faraday current
 - Battery current
 - Ultraviolet
 - Infra red
 - Short waves
 - Ultrasound (echography)
 - E.E.G
 - Ventriculography
- Protection of personnel against X-rays
- B) Nursing in physiotherapy
 - Definition
 - Handling of orthopaedics
 - Principles of physiotherapy
 - The role of the nurse in orthorpaedic surgery
 - Re- education of patients with arthritis
 - Varicose veins
 - Prevention of deformities in orthorpaedics patients
 - Basic notions of postures
 - Practical work and massage
 - Light massage
 - Movement of joints

COURSE TITLE: COMMUNITY HEALTH NURSING COURSE CODE: NUS NUS 5+03 (6CREDITS = 60HRS)

Course Description

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This course is designed to help students gain an understanding of the concept of community health in order to introduce them to the wider horizons of rendering nursing services in a community set-up, both in urban and rural areas. Also this course is designed to help students acquire the concept of health, understanding of the principles of environmental health and its relation to nursing in health and disease

General objective

Upon completion of this course, the students will be able to:

Describe the concept of health, community health and community health nursing.

State the principles of epidemiology and epidemiological method of community health nursing practice.

Explain the various services provided to the community and the role of the nurse

Demonstrate skills to practice effective nursing care of the individuals and families in the clinics as well as in their homes, using scientific principles.

Describe the concept of environmental health

Describe the principles of environmental health

Demonstrate skills to apply these principles in the pursing care of the

patients/ clients as well as in their own healthy living.

 \Box Describe the environmental health hazards and health problems of the country and services available to meet these.

COURSE CONTENT

Unit- I Introduction to community Health and community health Nursing

☐ Health and disease

Community, community health, community health nursing.

- Dimensions of health
- ☐ Health determinants

□ Indicators of health levels of health care

□ Primary health care: Elements and principles Nurse's role in primary health care.

□ Health for all by 2000 A.D

Evolution and development of community health nursing in India and its present concept.

Differences between institutional and community health nursing.

Community health team functioning

 \Box Philosophy, goals, objectives and principles of community health nursing

practice.

□ Qualities and functions of a community health nurse.

Unit-II community health nursing process

□Concepts and definition

□ Importance of the community health nursing process

□ Steps of the process: Community identification, population composition, health and allied resources, community assessment, planning and conducting community health nursing care services.

Unit- III Health Assessment

Characteristics of healthy individual

□ Identification of deviation from normal health.

Unit- IV Principles of Epidemiology and Epidemiological methods

Definition and aims of epidemiology

□ Basic tools of measurement in epidemiology

 \Box Uses of epidemiology

□ Disease Cycle

 \Box Spectrum of disease.

□ Levels of prevention of disease.

Disease transmission-direct and indirect

□Immunity

□ Immuring agents and immunization schedule

Control of infectious diseases

Disinfection

Unit- VII Referral systems

Unit – VIII Records and Reports

 \Box Types of records

 \Box Uses of records

Essential requirements of records.

Cumulative records

Design of cards/ Records

Unit-IX Minor Ailments

Classification

Early detection and management

□ Standing instructions/orders

Unit X Introduction to Environmental Hygiene

Components of environment

□ Importance of environmental health.

Unit-XI Environmental factors contributing to health water

 \Box Safe and wholesome water

Uses of Water

water pollution

water borne diseases.

□ Water purification

Air

□ Air pollution

□ Prevention and control of air pollution

Waste

Refuse

- Excreta
- Sewage
- Health hazards of these wastes
- □Collection removal and disposal of these wastes

Housing

- Site
- □ Basic amenities
- \Box Types and standard of ventilation
- □ Requirements of good lighting.
- □Natural and artificial lighting.
- Noise
- \Box Source of noise
- Community noise levels
- Effects of noise
- □Noise control
- Arthropods of Public Health Importance
- □ Mosquitoes, housefly, sandfly, human louse, ratfleas etc.
- □Rodents.
- □Control measures for these arthropods.

Unit - XII Community organization to promote Environmental Health

Levels and types of agencies: National, state, local, Government, Voluntary and Social agencies

Unit - II Health care services in Cameroon

- Health care concept and trends.
- Health care delivery system.
- Public sector: Rural areas, urban areas, health insurance, scheme, other
- agencies (defence, Railways etc.)
- Voluntary health agencies.
- Indigenous system of medicine.
- Nurse's role in health care services.

Unit – III Health Planning in Cameroon

- National Health policy.
- National Health planning.
- Health committees and reports.

Unit - IV Specialized community Health Services and nurse's role

- M. C. H. (Reproductive health and child care).
- School health services.
- Industrial nursing.
- Geriatric nursing.
- Care of the handicapped: physically and mentally challenged.
- Rehabilitation nursing.

Unit - V Nurse's Role in National Health Programmes

- Major health problems in Cameroon .
- National control and development programmes.
- National eradication programmes.
- Nurse's role in national health programmes.

Unit - VI Demography and family welfare demography

- Concept
- Trends in Cameroon and its implications.
- Concept of fertility and infertility.
- Small family norms.
- Family Welfare
- Concept
- Importance

- Aims and planning methods
- Family welfare policy
- National programme.
- Nurse's role in family welfare programme.

Unit – VII Health Team

- Concept.
- Composition.
- Functions.

Role of nursing personnel at various levels

- Multipurpose health worker: male and female
- Lady health visitor / Health supervisor
- Public health nurse
- Public health nurse supervisor
- District public health nursing officer.

Unit – VIII Vital Health Statistics

- concept
- Uses
- Sources
- Important rates and indices
- Vital health records and their utility.

COURSE TITLE: FAMILY HEALTH NURSING. COURSE CODE: NUS 502 CREDIT 6 (60HRS)

Family Health Nursing Description: Definitions of: Family, Health, Family Health; Historical Perspectives; Theoretical approaches: systems, institutional, structural, developmental, social unit; The structure of different types of families; The roles and functions of the family; Family developmental stages: Individual developmental stages, family developmental stages, and developmental tasks; Family

Concept, goals, objectives, family as a unit of health family health care services.

□Family health and nursing care process- family health assessment, family care plan.

 \Box Family health services- Material, Child care and family welfare services.

□ Roles and function of a community health nurse in family health services.

 \Box Family health records.

Family health care settings

□Home visiting

□ Purposes

□ Principles

- □ Planning and evaluation
- Bag technique
- Purposes
- Types of clinics and their functions
- Setting up of various clinics

□Functions of Health personnel in these clinics

COURSE TITLE: THEATRE/INTENSIVE CARE/ANESTHESIA COURSE CODE: NUS 507 CREDIT 6 (60HRS)

<u>Objective</u>: At the end of the course, the student should be able to apply knowledge of theatre techniques care for the critically ill in an intensive care unit and manage patient under anaesthetic action,

<u>Content:</u> The surgical or operating theatre (location, facilities functions), working in a team, theatre cleanliness, positioning patients for operation, types of nurses in the operating theatre. The intensive care unit (Reanimation), reception of patients, reanimation tray, suctioning, resuscitation, the critically

ill, the premature in the intensive care unit. Anaesthesia (names, types, actions) the recovering patient, care of the recovering patient, anaesthetic charts, etc.

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Content:

Anesthetic care

- Definitions
- Techniques of general anaesthesia (GA)
 - Inhalation
 - Intravenous anaesthesia
- Regional and local- regional aneasthesia
- Stages and signs of anesthesia
- Anaesthesia drugs
- Premedication
- Theater techniques

The surgical or operating theatre(location, facilities functions),

Working in a team Theatre cleanliness

Positioning patients for operation

The intensive care unit (Reanimation)

Reception of patients

Reanimation tray

suctioning, resuscitation, the critically ill, the premature in the intensive care unit. Anaesthesia (names, types, actions) the recovering patient, care of the recovering patient, anaesthetic charts, etc.

COURSE TITLE: HEALTH MANAGEMENT AND ADMINISTRATION COURSE CODE: NUS 508 (CREDIT VALUE 4 = 60hours)

Course Description

This course aims at giving the student an elementary understanding of basic principle of administration and its application to the management of ward and health unit. Also this course will help student to understand the basic concept of economics, health economics, the relationship between health and economic development, demand and supply, concept of cost and financing system of health care services in Cameroon. This will enable them to appreciate financial aspects of health care services.

General Objectives

Upon completion of the course the students will be able to:

- > Describe the meaning and principle of administration.
- > Apply the principle of administration in practice of nursing in various health care settings.
- Plan the nursing service in the ward and community health settings.
- Describe the importance of good administration in the day to day nursing service in varied health care settings.
- > Explain the meaning of economics and health economics.
- > Analyse the relationship between health and economic development.
- Explain the concept of demand and supply.
- Describe the structure of health care industry and characteristics of market for health care services.
- > Analyse the concept of cost in health care.
- Discuss financing system of health care services in Cameroon

Course Content

Unit-I Introduction

- Meaning and philosophy of administration and management and their significance.
- Elements and principles of administration.

Unit-II Planning: Aims, Principle, methods and types

Unit – III Organization: Command, Co-ordination and Control, Delegation, Staffing and Budgeting

- Definition, aims principles and techniques.
- Preparation of organizational chart of a hospital ward primary health center, sub center.
- Policies of the hospital and of the various departments of the hospital.

Unit - IV Administration of a hospital unit and ward

- Administration of ward/unit/health center, physical layout, safety measures, prevention of accident and infections, legal responsibilities of a nurse.
- Personal Management
- ✤ Job description, job specification, Job analysis, and job satisfaction.
- Staff development and staff welfare.
- Leadership styles, Democratic leadership.
- Management of Equipment and supplies
- ✤ Maintenance of supplies and equipment.
- Handling over and taking over of inventory.
- Indent and ordering of supplies and equipment.
- Problem solving: Process and approach, steps and methods of dealing with complaints of patients and other health team members.
- Record and reports: meaning, type of records and reports maintained in the ward, importance and use of records and reports. Records and reports maintained in Primary Health Center and Sub-Center.

Unit – V Introduction to Economics

- Definition and meaning, dimensions of economics, positive and normative economics.

Unit – VI Introduction to Health Economics

- Concept of Health Economics.
- Focus of health economics.
- ✤ Areas of health economics.
- * The economics of health and health care service Health and economic development.
- ✤ Causes of health problems in India.

Unit – VII Costs of Health Care

- Concept of cost, types of costs.
- Opportunity cost, total fixed and variable cost, average marginal and sunk

costs, cost benefit, cost effectiveness.

Unit - VIII Demand and Supply in Health Care

- Concept of demand, need, supply input, output, production function, industry and market.
- Structure of health care industry.
- * Characteristics of health care services market.
- ✤ Demand side and supply side.

Unit – IX Financing of Health Care in Cameroon

- Financing system and allocation.
- Sources of financing of health care services.
- Health plans and outlays, the relative role of state and central government on financing of health care services.
- ✤ Factors influencing the state's ability to finance health care services

F. Health information Management

- Definition and goals
- Statistic elements: units, population, samples
- Statistic sources
- Statistic calculation
- The health information process
- Data collection, collection media, forwarding
- Treatment(counting, regrouping, presentation)

- Analysis and interpretation
- Feedback and decision making

COURSE TITLE: BUSINESS & ENTREPRENEURSHIP COURSE CODE ENT 100 CREDIT VALUE 3 (30HRS)

Aim and objectives of the course

The most common serious mistake made in business is not picking the right business to begin with. This session will provide the student with important evaluation techniques to decide which is right for him/her and what it takes to start, run and grow a business.

INDICATIVE CONTENT MODULE I INTRODUCTION DEFINITION OF TERMS

- Business
- ➢ Entrepreneur
- > Entrepreneurship
- ≻ Etc

THE PROS AND CONS OF BUSINESS

- ✤ THE PRONS (BENEFITS)
 - Control
 - Money
 - Creativity and independence
- THE CONS (DIMERITS)
 - Uncertintity
 - Risk
 - Lack of ETRUCTURE

BUSINESS AND SELF EMPLOYMENT

- Entrepreneurial Culture
- Identification and generation of business ideas and opportunities
- Business Organization and Management

WHY MANY EMPLOYEES

THE DIFFERENT NATURE OF AN ENTREPRENEUR FAILURE RATES OOF SMALL BUSINESSES

CHARACTERISTICS OF A SUCCESSFUL ENTREPRENEUR.

- ✤ Guts
- Brains
- Capital

THE 10 Ds OF AN ENTREPRENEUR.

- Dream
- Decisiveness
- Doers
- Determination
- Dedication
- Devotion
- Details
- Destiny
- Dollars
- Distribute.

COURSE TITLE: RESEARCH PROJECT CORSE CODE NUS 598 CREDIT:12 Objectives:

This course is designed to offer the students the opportunity to gain experience in the research process by planning and conducting a technical project and to develop the ability to use critical thinking in analyzing data and in formulating conclusions based on empirical (original, I e evidence based findings) evidence.

Contents:

- Directed research in the discipline of nursing science (Maternity Nursing, Paediatrics, Medical, Surgical, and Community Nursing). The supervisor and the research project will be chosen by the student. It requires writing a project proposal, keeping an accurate nursing notebook, conducting adequately descriptive or analytical research, writing and presenting a short seminar based on the research results.
- Definition of research, the research process, part of a research work or book. Introducing research, statement of problem, hypothesis, research questions, and rationale for research, conceptional frame work, literature review, methodology, Results and discussions. Instruments for data collection questionnaire, probabilities, research and project writing etc.

COURSE TITLE: RESEARCH PROPOSAL AND SEMINAR PRSENTATION COURSE CODE: NUS 501 CREDIT: 4

Course Aim: The aim of this course is to enable the student to identify an area of nursing practice requiring research and proposing solution through seminar write up.

Outcome: By the end of this course, the student will be able to:

- Formulate a research proposal for a chosen area of interest
- Apply the principles of nursing research to develop a systematic approach to research
- Articulate their area of study to their peers **Indicative Content**
- Developing a research proposal
- Developing a seminar paper
- Delivering a seminar

COURSE TITLE: CURRICULUM AND INSTRUCTION IN NURSING. COURE CODE: 507 CREDIT 6 (60HRS)

Aim: The aim of this course is to introduce the student to the concept and role of teaching as a nurse scientist

Outcome: By the end of this course, the student will be able to:

- Describe the qualities of a good teacher.
- Develop a lesson plan for a teaching session.
- Effectively deliver a teaching session
- Identify learning needs of patients and communities, and suggest effective patient teaching strategies to meet these needs
- Critically explore the nurses' role as a teacher
- Develop an eclectic theory of learning and an eclectic philosophy of teaching
- Develop a curriculum for a nursing school.

Indicative Content

Teaching

- The nurse as teacher.
- Teaching and learning theories.
- Philosophy of education
- Teaching and learning methods
- Instructional materials
- Use of technology In nursing education
- Planning a teaching session.
- Delivering a teaching session.
- Curriculum development
- Patient teaching

- Health Education
- Assessment strategies
- Developing educational objectives
- Guidance and counseling
- Diversity among learners
- Factors influencing learning

TEACHING AND LEARNING STRATEGY

The teaching and learning strategies employed in this programme can be broadly defined as being enquiry-based, which has three features:

- i. Learning in context
 - ii. Elaboration of knowledge through social interaction, and
 - iii. An emphasis on meta-cognitive reasoning and self-directed learning through reflection.

One of the features of enquiry-based learning, as it will be used in this programme, is that it incorporates several teaching/learning strategies including lecturer-led sessions, student-led sessions, self-directed and independent study.

A balance between lecturer-led learning activities and experiential student-led learning strategies will help the student to develop as an effective independent practitioner with the capability to identify their own learning needs, and to engage in continuous professional development and lifelong learning within the constantly evolving nature of nursing practice.

The curriculum design recognises the key importance of the learning process and the requirement to support learning with structured and directed learning activities that gradually enhance the scope for learner-led approaches as the student appreciates the scope of nursing practice, the nature of the underpinning knowledge and the core attitudinal requisites.

An enquiry-based learning approach uses learning packages that contain a scenario that the students use as a focus. Lecturers develop these packages in collaboration with clinical/practice colleagues if need be.

The scenarios will provide exemples of clinical situations and patient presentations will stimulate students to engage in "real" situations. These will be used to structure learning sessions or to integrate curriculum themes.

Students are provided with three different types of reading lists, one that is relevant for the duration of the course, one that is semester specific and one that is specific to a learning package.

Such a structure provides pre- and post-session reading and activities that can be supported by the use of E-learning. Thus the students learning, use of computers and IT, and management of study time is structured and supported to ensure that all students are able to gain and assimilate the foundations of nursing theory and practice in a managed way.

The use of an enquiry-based learning approach will encourage the students' skills of enquiry, reflection, decision making, problem solving and of team working. Reflection and reflexivity are central to professional practice and clinical decision-making; also to flexibility in learning and problem solving. Enquiry-based learning encourages independent learning, facilitating analytic and critical thinking skills and the ability to find evidence systematically from diverse sources, to appraise the evidence and present this to peers.

The curriculum revolves around key problems/issues in professional nursing practice and supports complex decision-making by moving student thinking from simple/concrete to critical/analytic approaches.

Enquiry-based learning will be supported by lectures, seminars, workshops and workshop activities. This will emphasize student-led learning (e.g. by interactive group sessions and by framing appropriate questions for lecture and resource sessions to gain the knowledge and skills needed to address issues raised in the learning packages). Self-directed learning will also be incorporated.

The acquisition and development of psychomotor skills is a key feature of the nursing programmes. Thus skills teaching is integrated within the enquiry-based learning scenarios and a profile of skills development will be used to capture this aspect of the students' developments.

In keeping with the philosophy of an enquiry-based approach these core themes will be explored in an integrated manner, with the different subjects for example nursing theory and physiology not being compartmentalized into subject themes but merged together. The curriculum content, clinical skills and enquiry-based learning packages will facilitate application of the core themes to the needs and interventions appropriate to the client group.

PLACEMENTS WITHIN THE PROGRAMME COURSE TITLE: CLINICAL PRACTICE

Placements are a vital part of the curriculum providing almost 50% of the learning experience. Therefore placements are selected to ensure that they provide safe and supportive environments in which students are exposed to meaningful learning opportunities that are congruent with the focus and theoretical content of the term. The range of placements embraces the full range of care settings.

Students will have one block of placement during the second semester of the programme. The student will move from an observer role to working under direct supervision and finally to working under indirect supervision.

<u>Objectives</u>: At the end of the practice, the student should be competent to work alone and in a team on all the areas of nursing covered during practice.

Student will work in Hospital wards(pediatric, maternity, medical, surgical and theatre), health center and community with trained mentors assisting her in carrying out their duties, to get experience in maintain ward inventory supplies, preparation of duty roster and solving problems. Students will also get experience of working in the hostel kitchen, market, accident/emergencies/disaster scene and camps organized by the hospital.

Content:

- (a) Clinical Practice I &II (year l): Work in Medico surgical nursing, basic/general nursing, and traumatology and emergency nursing settings.
- (b) Clinical Practice III & IV (year ll):: Work in maternity nursing and gynaecologic nursing areas. (Public Health)
- (c) Clinical Practice V & VI (year lll):: Work in the health centre, community, community surveys, geriatric and psychiatric nursing areas. Work in the medico surgical specialty areas like ENT, Eye, skin clinics, Intensive care units and final research project.
- (d) Clinical Practice VII & VIII (year IV) Work in the medico surgical specialty areas like ENT, Eye, skin clinics, Intensive care units, Oncology, Haemodialysis and final research project

Each student to be given a skills development profile or skills booklet. Figure 5- Student's Clinical Role across the Programme

	Initially the student is assessed at the level of observer progressing to participant observer.				
Observer					
↓ Participant/ Observer	Participant observer is defined as : The student is closely guided by the mentor who will ensure that the student is able to observe care delivery before beginning to participate in certain aspects. The student may revert to earlier role behaviour in new situations.				
Participant/observer	After more experience in practice with support and guidance the student will be assessed at the level of supervised practitioner				
↓ ↓	Supervised practice level is defined as: Actively participates in and is				

Supervised Participant Supervised Practitioner	beginning to initiate appropriate nursing care. The student may revert to earlier role behaviour in new situations.
Supervised practitioner	During Placements in the last unit, the student will be assessed at the level of a competent practitioner.Competent practitioner is defined as: Actively undertakes and initiates appropriate nursing care and supports others in the delivery of care. Within this the student is clearly able to demonstrate that there is consistent evidence of the requisite skills and ability to practice safely and effectively without the need for direct supervision. The student may revert to earlier role behaviour in new situations.

ASSESSMENT STRATEGY

Assessment within the programme is viewed as an essential part of the learning process as it facilitates meaningful feedback, monitoring student development and identifying learning needs and strengths, thus focusing student learning and supporting student progression. Summative assessment enables judgements to be made regarding the student's academic, clinical and professional abilities. The assessment strategy has been designed to address a clearly visible integration of theory and practice across the programme.

The assessment strategy reflects the following principles:

(a) <u>Validity</u>. Each element tests relevant and important aspects of nursing theory and practice. There is a consistent emphasis on the application of theory to practice throughout the programme.

(b) <u>Reliability</u>. Care has been taken to devise assessment tasks that ensure consistency of approach, within and between the different branches of nursing, while allowing students to reflect, where appropriate, on their own individual experience. The assessment strategy ensures consistency through a 'team marking' approach (where more than one marker is involved in assessing a cohort of scripts) together with appropriate involvement of moderators and external examiners.

(c) <u>Sufficiency</u>. The number and range of assessment tasks ensures sufficiency of assessment. Particular attention is paid to the achievement of key competencies at the end of the programme.

(d) <u>**Progression**</u>. The learning outcomes, and the assessment tasks which test them, facilitate student progression throughout the programme.

(e) <u>Variety</u>. The assessment strategy provides a 'balanced diet' of tasks. This helps achieve an appropriate overall balance of validity and reliability. Moreover, student interest is maintained, and equity is achieved for students who may have preferences for or strengths in different forms of assessment.

Whilst theory and practice are assessed separately it is considered that all assessments facilitate application of theory to, and reflection on, clinical practice.

THE ROLE OF MENTORS IN THE TEACHING, LEARNING AND ASSESSMENT IN PRACTICE

The role of the mentor is crucial to the work-based and clinical practice elements of the course. The mentor will act as a role model, support and supervise the student, facilitate learning and undertake formative and summative assessment of the skills within the Skills Development Profile. Suitably experienced nurses and other health related practitioners will act, as appropriate, as associate mentors. These practitioners will often work with students for short periods of time, sometimes covering the mentor's off duty; alternatively providing short educationally–led practice experiences, which may not be summatively assessed, but contribute to the summative assessment process.

Mentors need to be conversant with a range of issues focusing upon key areas of teaching, learning, assessing and supporting students which address the following:

- The programme learning outcomes and assessment strategy
- Assessing practice
- Reflective practice
- Identifying and using learning opportunities
- The assessment documentation
- Motivating the challenging student
- Enabling students to take responsibility for their own learning
- Failing students and use of a learning contract/action plan
- Giving feedback
- Using relevant available support mechanisms.

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BACHELOR OF SCIENCE IN PUBLIC HEALTH (BsPH)

Overview of Bachelor of Science in Public Health Program (BSPH)

The Bachelor of Science in Public Health at SMU (BSPH) prepares you to conduct health-related programs with all populations in practice settings. This program consists of 128 semester credits, and you can complete it at your convenience. This major provides the foundation to advance in graduate degree programs such as the Master of Public Health (MPH.), the Master in Health Services Organization (HSO.), and other Allied Health areas.

Program Objectives

This program is aimed at providing you with an understanding of the key issues affecting the health of populations. You will develop skills in obtaining, reviewing and analyzing health information; planning and managing a health program or project; and in improving the health of populations.

Career Prospects:

You will be well-prepared to pursue a broad range of community and public health careers, or postgraduate studies in health-related disciplines:

- public health promoter and educator
- Health care manager and administrator
- Health policy analyst
- Health researcher
- Health program planner
- health consultant

Program Structure

To be awarded a Bachelor of Science in Public Health (BSPH), a student must complete the prescribe courses and earn at least 128 credits.

Core Courses (20 credits) BPH 301: Introduction to Health Promotion and Education BPH 303: Fundamental of Community Health **BIO 310: Bioethics** NUS 310: Nutrition and Human Health MCB 310: General Microbiology and Infectious Diseases NUS 340: Medical Sociology and Anthropology **Concentration Courses (48 credits)** BPH 302: Consumer Health **BPH 304: Public Health Practicum** BPH 401: Introduction to Environmental Health BPH 403: Maternal and Child Health BPH 405: Modifying Health Behaviors BPH 407: Introduction to Basic Epidemiology and Biostatics BPH 409: Chronic Disease epidemiology BPH 402: Substance Use and Abuse BPH 404: Stress Management **BPH 406: Sexual Education** BPH 501: Health aspect of Aging. BPH 503: Health Policy & Healthcare Systems BPH 505: Health Program Planning Implementation and Evaluation

- BPH 507: Project Design & Seminar on Public Health
- BPH 509: Preceptorship in Community Health
- BPH 502: Preceptorship in Programming
- BPH 504: Presentations on Emerging Infectious Diseases
- BPH 598: Public Health Research Project

Course title Credit L T(guided Р Tota Course (practice) code value (contact) study) 1 ENG 101 Use Of English I 3 30 0 30 0 2 SPT 100 Sports & Physical Education 10 0 10 20 CCE 100 Civics and Ethics 3 20 0 30 10 SET Introduction to Science and 3 20 0 10 30 Technology BIO 201 Anatomy and Physiology I 40 20 60 6 40 MLS 201 Introduction to Medical 6 20 60 Laboratory Science CHM 201 General Chemistry 40 20 0 60 6 Total 29 200 50 40

SEMESTER ONE YEAR ONE

SECOND SEMESTER YEAR ONE

Course	Course title	Credit	L	T(guided	Р	Total
code		value	(contact)	study)	(practice)	
MAT 210	College Algebra	3	20	10	0	30
ENG 102	Use of English II	3	30	0	0	30
BIO 202	Anatomy and Physiology II	6	40	20	0	60
MLS 210	Clinical Specimen Collection, Processing and Handling	6	40	10	10	60
MLS 204	Medical Entomology	6	40	20	0	60
MLS 214	Clinical preceptorship in sample collection, Processing and Handling 2 months	6	0	0	120	120
Total		30	170	60	130	360

FIRST SEMESTER YEAR TWO

Course	Course title	Credit	L (contact)	T (guided	P (Practice)	Total
code		value		study)		
FRE 101	Functional French I	3	20	10	0	30
ICT 211	Introduction to Information	3	20	0	10	30
	and Communication					
	Technology					
BPH 301	Introd. to Health promotion	6	40	20	0	60
	and Evaluation					
BPH 303	Fundamentals of community	6	40	20	0	60
	Health					
NUS 303	Medico Surgical Nursing I	6	40	10	10	60
BIO 310	Bioethics	6	40	20	0	60
Total		30	200	80	20	300

SECOND SEMESTER YEAR TWO

Course	Course title	Credit	L	T(guided	P (practice	total
code		value	(contact)	study)		
FRE 102	Functional French II	3	20	10	0	30
NUS 204	Nutrition and Human Health	6	40	10	10	60
NUS 304	Medico Surgical Nursing II	6	40	10	10	60
MCB 310	General Microbiology and	6	40	20	0	60
	Infectious Diseases					
NUS 206	Medical Sociology and	6	40	10	10	60
	Anthropology					
BPH 302	Consumer Health	6	40	10	10	60
BPH 304	Public Health Practicum	6	0	0	60	60
Total		39	220	70	100	390

FIRST SEMESTER YEAR THREE

Course	Course title	Credit	L	T (guided	Р	Total
code		value	(contact)	study)	(practice)	
BPH 401	Introduction to Environmental	6	40	10	10	60
	Health					
BPH 403	Maternal and Child Health:	6	40	20	0	60
	Midwifery Obstetric and					
	Gynecological Nursing II					
BPH 405	Health Care System &	6	40	10	10	60
	Advocacy					
BPH 407	Modifying health behaviour	6	40	10	10	60
BPH 409	Introd. To Basic Epidemiology	6	40	10	10	60
	and Biostatistics					
BPH 411	Chronic Disease Epidemiology	6	40	10	10	60
Total		36	240	70	50	360

SECOND SEMESTER YEAR THREE

Course	Course title	Credit	L (contact)	T (guided	Р	Total
code		value		study)	(practice)	
NUS 402	Mental Health and Psychiatric	6	40	10	10	60
	Nursing					
NUS 404	Clinical Pharmacology &	6	40	10	10	60
	Pharmacotherapeutics					
NUS 406	Research methodology and	6	40	20	0	60
	Biostatistics					
NUS 408	Health Management /	6	40	10	10	60
	Administration					
BPH 402	Substance Use and Abuse	6				
BPH 404	Stress Management	6	40	10	10	60
BPH 406	Sexual Education	6	40	20	0	60
Total		42				
NUS 408 BPH 402 BPH 404 BPH 406 Total	Health Management / Administration	6 6 6 42	40 40 40	10 10 20	10 10 0	60 60 60

FIRST SEMESTER FOURTH YEAR

Course code	Course title	Credit value	L (contact)	T (guided study)	P (practice	Total
NUS 401	Geriatric Nursing: Health Aspect of Ageing	6	40	10	10	60
NUS 507	Curriculum and Instruction in Nursing	6	40	0	20	60
BPH 501	Health Policy and Health Care System	6	40	20	0	60
BPH 503	Health programs planning, implementation and Evaluation	6	0	0	60	120
BPH 505	Designed Project and Seminar on Public Health	6	0	0	60	120
BPH 507	Preceptorship in Community Health	6	10	0	50	60
Total		36	130	30	200	360

SECOND SEMESTER FOURTH YEAR

Course	Course title	Credit	L	T (guided	P (practice)	Total
code		value	(contact)	study)		
BPH 502	Preceptorship in Health	6	0	0	60	60
	Programming					
ENT 400	Business & Entrepreneurship	3	20	0	10	30
BPH 504	Presentation on Emerging	6	40	10	10	60
	infectious diseases					
MPH 598	Public Health Research Project	12	0	0	120	120
Total		30	60	10	200	290

Course Description

BPH 301: Introduction to Health Promotion and Education

This course introduces student to the field of Health Education/Promotion. introduced to the theories, models and frameworks used in both public health and health promotion; explore the evolution of public health and health promotion; examine case studies highlighting responses to public health and health promotion issues; and explore the relationship between health, policy development, and the health care system as well as the ethical principles that guide the profession.

BPH 303: Fundamental of Community Health

This course outlines the history, evolution and status of the practice of health education among groups of people who define themselves as a community. There is a focus on health behaviors, environmental influences, health policy, and economic and health care system issues in health promotion and disease prevention.

NUS 310: Nutrition and Human Health

Introduces the student with the basic principles of nutrition including a study of the nutrients, their functions and sources, the application of nutrition principles to the various stages of the human life cycle, the question of food safety in terms of additives, residues, and natural toxicants, and the area of

nutrition quackery. Students will become involved in self-evaluation projects and group discussions that will enable them to apply the basic principles to their daily eating habits and lifestyles.

BIO 310: Bioethics

This course aimed at presenting the basic concepts, principles, and elements of ethics as well as formulating the ethical principles relevant to medical practice, the doctor-patient relationship, and related areas of concern. The course begins with a brief overview of ethics, and them moves to develop and consider the moral values and principles relevant to medical practice and bioethics. The course aims to consider the defense of general views on the moral values involved in bioethics, as well as the complicated issues of applying this general knowledge to particular situations. The course hopes to develop moral wisdom (knowledge about ethics and the ability to think ethically) and moral virtue (a stronger commitment to act morally). Topics to be covered include: the nature of the Doctor-Patient Relationship, principles of Patient Decision-Making, Life-Sustaining Treatments (including CPR, and medical nutrition and hydration), Reproductive Issues (including contraception, artificial reproductive technologies, abortion), arguments for Euthanasia and Physician-Assisted Suicide, and Research Ethics (including a consideration of the Stem Cell controversy), etc.

MCB 310: General Microbiology and Infectious Diseases

The overall goal of this course is to introduce students to the field of microbiology and emerging infectious diseases. It will cover a wide range of topics including bacteriology, virology, microbial pathogenicity and epidemiology, body Defense Mechanisms against infection, the pathophysiology and epidemiology of infectious diseases, host-pathogen relationships and the mechanisms behind the emergence of new microbial threats as well as the pharmacology of antimicrobial and antiviral agents, The intent is to provide an understanding of the medically relevant bacterial, fungal and viral pathogens and the diseases they produce. The emphasis will be on the pathophysiology of these diseases, the nature of host-parasite interactions and the different clinical syndromes caused by these pathogens. It is not the purpose of this course to teach the clinical management and therapy of infectious diseases

BPH 302: Consumer Health

An in-depth study of the factors involved in the selection and evaluation of health services and products. Emphasis includes medical quackery, efficiently using health services, consumer protection, alternative and complementary therapies, food selection, and influences of advertising on consumer choices.

BPH 304: Public Health Practicum

Students will be placed in community health agencies or public health facilities for field instruction. Students are supervised and evaluated by the university staff and the cooperating agency staff. A minimum of 40 hours per week for 8 weeks is required.

BPH 401: Introduction to Environmental Health

An analysis of environmental nature of public health and on controlling the factors that are harmful to health. Focus is on current environmental issues including water and air pollution, workplace safety, environmental toxins, food safety, and shelter and how those issue have an impact on the health of individuals.

This course will develop your knowledge, critical thinking and clinical skills required to respond safely to manage maternal, neonatal and pediatric health within the paramedic practice setting. You will analyze the factors affecting the prevalence and outcome of maternal, neonatal and pediatric health in Australia, and will investigate the role of paramedics in these changing trends. You will develop an understanding of primary health care and broader health systems that optimize patient outcomes in maternal, neonatal and pediatric cases.

BPH 405: Health Care systems and Advocacy

This course is designed to explore the political structures and social forces that shape health care delivery. In this course, students will examine the role of the masters-prepared nurse as political activist and policy advocate within the U.S. health care delivery systems of care. Policies that influence health care economics, access, safety, quality, or efficacy will be investigated.

BPH 407: Modifying Health Behaviors prerequisite

This course is intended to introduce students to the learning and behavioral science theories that provide a framework for the practice of health education and promotion. Application of the theories to planning and implementing health promotion and education programs for individuals, groups, families, and communities will be emphasized. This course also introduces the students to various approaches to describing, explaining, and predicting health behaviors that have or are perceived to have significant effect on human health.

BPH 409: Introduction to Basic Epidemiology and Biostatics

This unit aims to provide students with an understanding of the main concepts and methods of epidemiology and biostatistics within the context of public health and health promotion. It will assist students to understand, apply and interpret these methods and to critically appraise the health research literature.

BPH 411: Chronic Disease epidemiology

This course will document the fundamental concepts in chronic disease epidemiology, common research methods utilized in chronic disease epidemiology, and unique applications of those methods for key chronic diseases, including cancer, cardiovascular disease, diabetes, and other chronic conditions.

BPH 402: Substance Use and Abuse

This course will examine the impact of mood-altering substances on the individual, family and society. This includes an exploration of the interrelatedness of personal decisions regarding the

use/non-use of mood-altering substances on politics, economics, and the various socio-cultural institutions.

NUS 340: Medical Sociology and Anthropology

The main objective of this course is to enable students to describe the social, political, economic, and cultural forces that influence social behavior by exploring health, illness, and health care from a sociological perspective. Topics to be covered: definition of sociology; Historical background ; Diagnosis of modern society: Conte and Marx; Basic concepts of society, culture and structure in the analysis of social behavior; Basic analytical concepts, social processes, institution, the nature of human groups; Family deviant behavior; Social Theories; Theorists of modern society, Social stratification and social stratification in East Africa; Power Structure; Ideology and Economic institutions in East Africa, Impact of ideology on social and Economic development in East Africa; Religion in Society; Integrative system of society, Impact of Christianity on African traditional beliefs in East Africa; Formal Organization; Bureaucracy in Industrial societies; Social conflict and social change; Social functions of conflict in society, Conflict and social change, Social disorganization (anomia and deviance: Durkeim), Medical sociology. Definition of Anthropology; School of thought in Anthropology; Cultural evaluation, Diffusion of culture, Historical relation, integration. Functional approaches, Structural approaches; Cultural Basic concepts in Anthropology: The study of culture, culture change as an instrument of adaptation, material culture, thought and culture, personality and culture, Social control, Principles of social structure, National identity, Kinship and marriage, Language and culture, Sickness and healing

BPH 404: Stress Management

This course exposes students to a holistic approach to stress management. It treats both cognitive skills and relaxation techniques with the intention of preventing and/or alleviating the physical symptoms of stress. The learning activities of the course are both theoretical and experiential

BPH 406: Sexual Education

This course is designed to be an exploration of topics in sexual health. Students will examine adolescent and sexual identity development sexual health issues such as sexually transmitted disease, reproduction and sexual violence, and community health strategies used to address sexual health such as sexuality education, disease prevention and sexual health promotion efforts, sexual/reproductive health care. Students will also explore the impact of attitudes about sex on sexual health and on community health strategies to address sexual health.

BPH 501: Health aspect of Aging

This course will provide an overview of issues related to public health and aging. We will begin with an overview of the demography and epidemiology of aging, and discuss how aging is viewed in society today, including myths of aging and stereotypes of aging, and briefly review theories of aging. The course will continue to cover the concept of successful aging, the implications of chronic illness and disability for public health, health promotion for older adults, and other topics central to public health in an aging society.

BPH 503: Health Policy & Healthcare Systems

This course will introduce you to concepts, elements, policy analysis processes and outcomes of public policy making in general and health policy making in particular. You will use foundational knowledge on public policy analysis and apply this knowledge to some global health policy issues. As a health care professional, you will be able to use your knowledge of health policy and determine how this knowledge of policy analysis might apply in your health care workplace. This course will not only help you develop your critical thinking, literature search, and critiquing skills but also help you

develop knowledge of evolving health care system in response to economic, cultural, technological, political, ideological, and globalization factors and forces. More specifically, the course will help you experience the whole public policy process as you apply the foundational knowledge on public policy making to a current major health policy issue in your province or territory. You will also get the opportunity to participate in a simulated policy community as you apply your policy analysis knowledge to a major current health care policy issue in your country.

BPH 505: Health Program Planning Implementation and Evaluation

This course introduces the skills and techniques required to research and develop health programs at the community, state, and national levels. Students will be presented with the concepts, processes and techniques used in health program planning, implementation, and evaluation. The students will engage in planning, implementation and evaluation exercises. The course will emphasize the importance of teams and partnerships in successful health promotion programs

BPH 507: Project Design & Seminar in Public Health

The research design project involves an individual student or a small group of students working as a team to put the knowledge acquired in previous courses into concrete praxis to design and present a nominated project in any chosen area. The tasks include the study of the available processes, process selection, calculation of material and energy balances, preparation of flow sheets, and preparation of a design report and drawing of the plant layout.

BPH 509: Preceptorship in Community Health

This course exposes students to gain first hand knowledge and experience in a particular area of a health care organization. For example, the students can be attached to the finance office from where they will gain experiences from executives and junior staff running the financial services of an institution. The practice is to attach the student to a particular mentor of the service, such as the Director of Finance who will mentor, guide and evaluate the student at the end of the practicum. The student will in turn produce a practicum report which will be graded by the mentor.

BPH 502: Preceptorship in Health Programming

This course is very similar to the preceptorship in Community health above. The difference is that the student is attached to a specific services where he/she learns how programme planning takes place in a particular service. The student works with the service managers and at the end, writes a report on his/her experiences of how programmes are planned and executed, and evaluated in the service.

BPH 504: Presentations on Emerging Infectious Diseases

In this course, students are grouped into groups of four, depending on the size of the class. Each group is assigned a specific emerging infectious disease, in which they carry out research and present their findings about the evolution of the disease. Each student is expected to work on a specific aspect of the disease during the presentation. Hence each student contributes to the final product, their report on the disease.

BPH 598: Public Health Research Project

A program of study on an approved research topic in nursing will be followed up by a supervisor. This supervised individual study provides an opportunity for in-depth reading and research on a topic selected by the student and supervisor. Students in this program of study may carry out a pilot project in preparation for a thesis or dissertation. Students are expected to select a researchable problem in theology and carry out a study on it. This project should follow the American Psychological Association (APA) format.

PART TWO: GRADUATE PROGRAMS

Graduation Requirements

In order to graduate with a Master's Degree in the School of Health and Human Services, a student must earn at least 120 credits according to the following program structure:

Core Courses	= 7 Courses	= 42 Credits
Concentration Courses	= 6 Courses	= 36 Credits
Research Course	= 1 Course	= 6 Credits
Internship (Practicum)	= 2 Courses	= 12 Credits
Seminars	= 1 Course	= 6 credits
Thesis	= 4 Courses	= 24 Credits
Total	= 20 Courses	= 120 Credits
Research Course Internship (Practicum) Seminars Thesis Total	= 1 Course = 2 Courses = 1 Course = 4 Courses = 20 Courses	= 6 Credits = 12 Credits = 6 credits = 24 Credits = 120 Credit

1. MASTER OF CLINICAL PSYCHOLOGY

INTRODUCTION

Background of the Programme

The programme described in this document is as a result of the desire to train dynamic modern clinical psychologist.

It represents a major step forward in the ladder approach to career development

The program was drawn up taking into consideration the BMP system utilized by the University of Ministry of higher education Cameroon and the course credit system proposed by MINESUP

- Admission Requirements
- Degree in Nursing, clinical psychology and related field
- Duration of Training
- Two years
- Award Requirements
- A student must complete all courses within this programme to be awarded a MSc. of clinical psychology

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
HPY 601	Health Psychology	6	40	20	0	60
CPY 601:	Clinical Pharmacology & Pharmacotherapeutics	6	40	20	0	60
CPY 603	Clinical Psychology	6	40	10	10	60
CPY 605	Health and Society	6	40	10	10	60
CPY 607	Clinical Practice	6	10	10	40	60
TOTAL		30	170	70	60	300

SEMESTER 1 YEAR ONE

SEMESTER 2 YEAR ONE

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
CPY 602	Pastoral Psychology	6	40	20	0	60
CPY 604	Psychiatry	6	40	10	10	
CPY 606	Psychoanalysis	6	40	10	10	60
CPY 608	Facilitating Change	6	40	10	10	60
CPY 610	Applied Research in clinical psychology	6	40	10	10	60
TOTAL		30	200	60	40	300

SEMESTER 2 YEAR TWO

Course		Credit	L	T (guided	Р	Total
Code	Course Title	Value	(contact)	study)	(practice)	
ENT 600	Management, Organization	3	20	0	10	30
	Behaviour and					
	Entrepreneurship					
CPY 616	Seminar Presentations in	12	0	0	120	120
	pschological Issues					
MPH 607	Organization and	6	40	10	10	60
	Management of Healthcare					
	Systems					
MPH 611	Health Information	6	40	10	10	60
	Technology					
MPH 613	Medical Management of	6	40	10	10	60
	Disease					
MPH 615	Principles and Practice of	6	40	10	10	60
	Preventive Medicine					
TOTAL		36	0	0	360	360

SEMESTER 2 YEAR TWO

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
CPY 690	Clinical Psychology Practicum(Internship)	12	0	0	120	120
CPY 698	Master's Thesis Clinical psychology	24	0	0	240	240
TOTAL		36	0	0	360	360

HPY 601: Health Psychology

This will introduce students to a range of ways psychologists work within clinical and healthcare settings, and the science behind their roles. Students will learn about a range of roles and settings

where the science of health and clinical psychology is applied. This includes psychologists working within healthcare and related services, as well as non-psychologists using evidence or understanding derived from clinical/health psychology.

Students will learn how communication between health professions and individuals facilitates or hinders effective care. Students will be encouraged to consider the different psychological theories used within these roles and how interventions can occur at individual, group (e.g.family, organisational unit) or population levels.

CPY 601: Clinical Pharmacology & Pharmacotherapeutics

Pharmaceutics deals with the formulation, preparation, preservation, and dispensing of medications and related therapeutic devices. A successful dosage form or drug delivery system must ensure the effective, reliable, and safe delivery of the drug to its site of action in the body. The course will explore the many physical, chemical, engineering, organoleptic, and esthetic principles involved in dosage form design and preparation. From tablets and capsules to syrups and injectables, the student will gain an in-depth appreciation of the role of dosage form characteristics relative to the route of administration in drug therapy decisions. Learning activities in the course consist of lectures, problem-solving exercises, and quizzes with feedback review.

CPY 602: Pastoral Psychology

This course introduces a method of spiritual care as practical theology. Students will be asked to engage the experiences of loss, violence, doubt, and despair reflected in spiritual care conversations. They will be invited to use theological, philosophical, psychological, and cultural studies to reflect upon these issues, and develop theologically and/or spiritual care as practical theology. Students will be asked to engage the experiences of loss, violence, doubt, and despair reflected in spiritual care asked to engage the experiences of loss, violence, doubt, and despair reflected in spiritual care conversations. They will be invited to use theological, philosophical, psychological, and cultural studies to reflect upon these issues, and develop theological, philosophical, psychological, and cultural studies to reflect upon these issues, and develop theologically and/or spiritually based strategies of care and justice studies to reflect upon these issues, and develop theologically and/or spiritually based strategies of care and justice studies to reflect upon these issues, and develop theologically and/or spiritually based strategies of care and justice studies to reflect upon these issues, and develop theologically and/or spiritually based strategies of care and justice

Two questions that undergird this course is 1)"what is the relationship between pastoral care and justice in and for the broader community?" and 2) "what do diverse feminist ethical and theological perspectives contribute this prior question?" These questions will guide us throughout the semester as we 1) read diverse perspectives on pastoral care and community justice; 2) visit ministry sites that seek to respond to various forms of structural, i.e. economic, healthcare; gendered, ethnicity/racial, sexuality, prison, etc. forms of injustices that impact specific communities; 3) articulate pastoral theologies of care that explicit integrate ethical commitments to justice and responsible pastoral action; 4) explore the difference that difference makes in the texts (human narratives as well as those written); 5) interrogate the exercise of power in unjust social, religious and structural practices and in justice oriented practices of care.

CPY 603: Fundamental Therapeutic Skills (Clinical Practice)

This course presents the theories and methods of several models of brief therapy, including the crisis intervention model. The structure and rationale of brief therapies are examined as applied to a wide range of problems. The acquisition of skills essential for practice of short-term psychotherapy and crisis are covered. This course also includes specialized emergency assessment procedures such as the mental status examination, evaluation for the potential for suicide and violence, and other topics in crisis intervention. Empirical findings, professional issues, and ethical concerns are discussed.

CPY 604: Psychiatry

Course Aim: This course is designed to help students develop the concept of mental health and mental illness, its causes, symptoms, prevention, treatment modalities and nursing management of mentally ill, to examine the principles of patient education in nursing care, and explore communication in mental health nursing and strategies in stress management

Objectives

By the end of the course students will be able to:

Describe the concept of mental health and mental illness and the emerging trends in psychiatric nursing.

Explain the causes and factors of mental illness, its prevention and control.

Identity the symptoms and dynamics of abnormal human behavior in comparison with normal human behavior

Demonstrate a desirable attitude and skills in rendering comprehensive nursing care to the mentally ill.

Describe how to apply communication skills in psychiatric consultation and psychoanalysis

Analyze the principles of initiating, maintaining and terminating a therapeutic relationship effectively

Course content

Unit – I Introduction

Definition of mental health and mental illness

Definition of terms used in psychiatry.

Review of mental mechanisms (ego mechanisms).

History of psychiatric nursing

Trends in psychiatric nursing

Detailed content

- Principles of growth and development
- Erickson's developmental stages, Piaget's stages of cognitive development, Kohlberg's theory of moral development, Maslow's hierarchy of needs
- Definition of mental health and mental health alteration, Current attitudes and sociocultural influences on mental health
- Data collection and diagnostic tests for a client with mental health alteration, Patient's rights as they relate to the client with mental health alterations
- Ethical and legal concerns as they relate to assessment of mental health issues,
- Disorders usually first evident in infancy, childhood or adolescence.
- Autistic disorder, Attention-deficit hyperactivity disorder, Conduct disorders
- Eating disorders, Sleep pattern disturbance, Elimination disorders (bed wetting)
- Anxiety disorder, Etiology, Manifestations, Intervention, Nurse's reaction to anxious patients
- Fear/Phobia, Defense mechanisms, Specific phobias, Management
- Stress; Stress and stressors, Psychopathology, Nursing care for the client with stress.
- Somatoform disorders, Conversion disorder, Pain disorder, Hypochondriasis, Treatment and nursing care
- Mood disorders; Depressive disorders, Bipolar disorders
- Suicide, Nursing management
- Schizophrenia; Sub-types, Characteristics, Concepts and principles, Nursing approaches
- Delusions/illusions, Hallucinations.
- Paranoid psychoses; Characteristics, Concepts and principles, Nursing approaches
- Personality disorders; Characteristics, Concepts and principles, Nursing approaches.
- Perversion, psychopathological and borderline states: various forms of perversion, professional and affective instability, character and behavior disorders (mythomania, kleptomania, pyromania, threatening behavior)
- Alcoholism; Definition, Causes, Characteristics, Drug therapy and rehabilitation program, nursing approaches to assessment and management
- Substance abuse; Causes, Characteristics, Management
- Neurotic disorder; Characteristics, Concepts and principles Nursing approaches
- Chronic brain syndrome (organic psychosis)
- Mental-health problems of the age
- Treatment modes; Crisis intervention, Milieu therapy, Behavior modification
- Activity therapy, Group/family therapy, Electroconvulsive therapy
- Psychopharmacology; Antipsychotics, Antidepressants, Antianxiety (tranquillisers), Antimanic, Anti-Parkinson drugs.

Unit - III Mental Health Assessment and communication in nursing

Psychiatric history taking

Interview technique and mental status examination

Unit – IV Community Mental Health

Concept, importance and scope

Attitude and misconception towards mentally ill

Prevention of mental illness (preventive psychiatry) during childhood,

adolescence, adulthood and old age.

 \Box Community mental health services.

□Role of nurses in community mental health services.

Unit – V Psychiatric Nursing Management

Definition of psychiatric nursing.

□ Principles of psychiatric nursing.

□Nursing process.

□Role of nurses in providing psychiatric nursing care.

□ Therapeutic nurse-patient relationship.

Communication skills.

Unit – VI Mental disorders and Nursing Interventions.

Etioloy- various etiological theories (genetics, biochemical, psychological, etc.)

□Classification of mental disorders.

Organic mental disorders- Acuter brain syndrome.

Chronic brain syndrome.

Functional Mental Disorders

 \Box Prevalence, etiology, signs and symptoms, prognosis, medical and nursing

management.

 \Box Schizophrenic disorders.

□Mood (affective) disorders.

□Manic depressive psychosis.

Anxiety states.

Definition, etiology, signs, symptoms, medical and nursing management of:

Phoebic disorders, obsessive compulsive disorder, depressive neurosis, conversion

disorders, dissociative reaction, hypochondriasis, psychosomative disorders, alcohol,

drugs and other psychoactive substances abuse.

Unit – VII Bio-Psychosocial Therapies

Psychopharmacology

Definition, classification of drugs, antipsychotic, antidepressant, antimanic, antianxiety agents.

□Role of nurses in psychopharmacology.

Psychosocial therapies

Definition of psychosocial therapies.

Types of therapies: individual and group therapy, behaviour therapy, occupational therapy.

□Role of nurse in these therapies.

Somatic therapy

□History, technique of electro-convulsion therapy (ECT), indications, contraindications.

Role of nurses before, during and after electroconvulsive therapy.

Unit – VIII Forensic Psychiatry / Legal Aspects.

Legal responsibilities in care of mentally sick patients

Procedure for admission and discharge from mental hospital, leave of absence.

Mental Health Act 1987

□Narcotic Drugs and Psychotropic Act 1985

Unit – IX Psychiatric Emergencies and Crisis Intervention

□Over active patient

Destructive patient

Suicidal patient.

CPY 605: Clinical Psychology

The unit begins by covering key concepts from epidemiology, which will inform the substantive topics. It outlines an approach based on viewing many major public health problems as being a feature of populations not individuals, and why the best way to tackle these problems is by intervening at a population level. An explicit aim is to focus on population causes and population cures, rather than focusing on "sick" or high risk individuals, who are just those at the extremes of the distribution in a population. The major of the sessions will then cover several substantive issues that illustrate these general principles: obesity, screening for disease, alcohol consumption, substance abuse, parenting effects on children, international effects of parenting on children, a lack of happiness (from a positive psychology perspective), and depression. The final session will cover issues to do with getting evidence-based interventions implemented into practice.

MPH 607: Organization and Management of Healthcare Systems

This course is one of two MPH courses that fulfills the organization theory/management degree requirement. These courses provide knowledge of the theories of organizations, the use of leadership, management processes, and organizational structures and outcomes. Specific topics include governance, strategic management and marketing, human resources management, and process improvement. This course is designed for future managers and leaders of health care organizations and those who expect to have extensive involvement with them from the perspective of buyers, insurers, or policy makers. The course provides students with knowledge about how the best health care provider organizations deliver high quality, cost effective health care, how they respond to their environment, and how they reach and implement decisions about future activities.

MPH 611: Health Information Technology
Health information technology (HIT) is a strategic tool for modernizing the healthcare delivery system in the U.S. This one-credit introductory course will prepare students with a basic understanding of major HIT applications and essential skills of managing them. Main topics include: (1) an introduction to electronic health records, computerized prescriber order entry, and computerized clinical decision-support; (2) federal initiatives for accelerating the widespread adoption of HIT; (3) anticipated benefits and known unintended adverse consequences; and (4) methods for evaluating HIT success.

MPH 613: Medical Management of Disease

Basic introduction to how disease is conceptualized and managed under the medical model. The course includes an introduction to medical terminology and disease taxonomy, and a basic introduction to issues in disease natural history, progression, prognosis, and diagnostic and therapeutic decision making and management relevant to non-medical health services professionals., epidermiology of diseases of public health importance.

MPH 615: Principles and Practice of Preventive Medicine

This course is intended to introduce preventive medicine residents and graduate students to the principles of preventive medicine and public health via a seminar approach. The goal of this course is to introduce preventive medicine residents and public health graduate students to the principles of preventive medicine and public health via a seminar approach. Course Objectives (course competencies): 1.Individual seminars are facilitated by residency physician faculty and other invited physician faculty who provide guidance and oversight to the presenting resident for a given session. 2. Students will develop presentations that are based on peer review papers selected by the residents who also facilitate the participation of non-physicians enrolled in the course. 3. Students will present on topics including, but not limited to, emerging infectious diseases, cancer epidemiology, public health policy, preventive health services and management, immunizations, cardiovascular disease, and genomics.

CPY 606: Psychoanalysis

The course starts with a historical introduction to the topic of psychosomatics, showing how ideas about psychosomatic illness originating in the early 20th century have influenced current thinking, both lay and professional, and tracing the development of holism. The idea of medically unexplained illness will then be introduced and the contributions of different approaches (biological, cognitive, emotion-regulation, interpersonal, socio-cultural) to our understanding of medically explained and unexplained conditions will be discussed.

Throughout, there will be a focus on methodological and measurement issues, and students will be encouraged to evaluate the relative contributions of the different research approaches, and how they can be integrated. The unit will finish with a consideration of therapeutic strategies for the management of medically unexplained conditions.

CPY 607: Health and Society

This unit examines how the social environment and different backgrounds influence the presentation of different physical and mental health experiences. How these factors shape government policy-making which in turn influences health care behavior, delivery and the health of the nation. The unit also explores the role that prejudice and discrimination play in these relationships.

CPY 608: Facilitating Change

This unit covers the key interventions within clinical and health psychology that are designed to facilitate change, improve well-being and promote recovery.

Part I involves understanding the principles of CBT; assessment and formulation; CBT for several mental health conditions and the application of this approach to physical health conditions. Part II involves increasing an understanding of other the rapies for physical and mental health conditions.

3. MASTER OF PUBLIC HEALTH

INTRODUCTION

Background of the Programme

The programme described in this document is as a result of the desire to train dynamic modern public health experts.

It represents a major step forward in the ladder approach to career development

The program was drawn up taking into consideration the BMP system utilized by the University of Ministry of higher education Cameroon and the course credit system proposed by MINESUP

- Admission Requirements
- Bachelor's degree in a relevant discipline with at least 2.0 GPA or equivalents. **Pre-Requisites**
- Students coming from other universities will need to take a pre-requisite course called MPH 500: Seminar on Graduate Studies. This course covers areas that graduates of SMHI are already familiar with. These include an understanding of the American liberal arts and sciences tradition as well as the following courses:
- 1 Ethics & Christian Studies,
- 2 US Government, Politics, & Global Issues,
- 3 Logic, Proofs, & Critical Thinking
- In addition, those coming into MPH program from disciplines not related to public health, will also have to take MPH 510: Foundations of Public Health, which should provide them with a good background into public health, while Clinical Psychology majors will take Human Anatomy and Physiology and some other courses as shall be determined.

Duration of Training

- Two years
- Award Requirements
- A student must complete all courses within this programme to be awarded a MSc. of public health. To earn the MPH, one has to take at least 48 credit hours. Each course is four credit hours and undertake an independent research which will be defended publicly.

Course		Credit	L	T (guided	Р	Total
Code	Course Title	Value	(contact)	study)	(practice)	
MPH 601	Introduction to Public Health	4	30	10	0	40
	and Public Health Genetics					
MPH 603	Medical Management of Disease	6	40	10	10	60
MPH 605	Healthcare Quality, Performance	6	40	10	10	60
	Measurement and Improvement					
MPH 607	Organization and Management of Healthcare Systems	6	40	10	10	60
MPH 609	Principles and Practice of Preventive Medicine	6	40	10	10	60
MPH 611	Health Information Technology	6	40	10	10	60
TOTAL		36	245	65	50	360

SEMESTER 1 YEAR ONE

SEMESTER 2 YEAR ONE

Course		Credit	L (contact)	T (guided	Р	Total
Code	Course Title	Value		study)	(practice)	
MPH 602	Biostatistical Applications for Public Health	6	40	20	0	60
MPH 604	Cost-Effectiveness Analysis in Health	6	40	10	10	60
MPH 606	Introduction to Public Health Policy and Advocacy	6	40	10	10	60
MPH 608	Organization and Management of Health Advocacy and Community- Based Non-profits	6	40	10	10	60
MPH 610	Corporate Finance for Health Care Administrators	6	40	10	10	60
TOTAL		30	200	60	40	300

SEMESTER 1 YEAR TWO

Course		Credit	L (contact)	T (guided	Р	Total
Code	Course Title	Value		study)	(practice)	
ENT 600	Management, Organization	3	20	0	10	30
	Behaviour and					
	Entrepreneurship					
MPH 613	Data Management in Health Care	6	40	10	10	60
MPH 615	Health Care Financial and Managerial Accounting	6	40	10	10	60
MPH 617	Seminar Presentations in Public Health Issues	6	0	0	60	120
MPH 619	Survey of the U.S. Health Care System	6	40	10	10	60
MPH 621	The Health Services System	6	40	10	10	60
TOTAL		32	170	40	110	320

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
MPH 616	Public Health	12	0	0	240	240
	Practicum(Internship)					
MPH 698:	Master's Thesis Public	24	0	0	240	240
	Health					
TOTAL		36	0	0	480	480

SEMESTER 2 YEAR TWO

MPH 601: Introduction to Public Health and Public Health Genetics

This course is intended to serve as an introduction to the major issues of health and public health genetics. The course focuses on ethical, legal, and social issues and analysis arising from the increasing application of genetic technologies to the health of individuals and populations. The four course segments cover the technical and social background of population-based genetic interventions, decision making criteria used in assessing the feasibility of proposed genetic screening programs and gene therapy trials, policy frameworks, such as cost-effectiveness analysis and ethical reasoning, which can aid in the selection and design of genetic programs and policies, and the deliberative processes decision making bodies can use in resolving differing interests as policy is developed and adopted. Each segment involves didactic presentations and class exercises in which students will grapple with current and anticipated publicized dilemmas. The segments collectively are linked by examples common to each portion of the course.

MPH 602: Biostatistical Applications for Public Health

Application of biostatistical principles to critical analysis of retrospective studies, prospective studies and controlled clinical trials, as well as studies in the health services literature. Selection, basic calculations and interpretation of statistical methods for detection of significant associations and differences.

MPH 613: Data Management in Health Care

This course introduces the students to the use of spreadsheets and relational databases for decisionmaking. It covers data manipulation and analysis, formatting and charting using Microsoft Excel; as well as design and implementation of, and data retrieval from, small-to-medium relational database systems using Microsoft Access.

MPH 621: The Health Services System

First part of two-course sequence focusing on major issues in the organization of a health services system: role of values; assessment of health status; analysis of need, access and use of services; current supply and distribution of health resources; analysis of health care costs and expenditures.

Focuses on: the definition and assessment of quality of care; control of quality and costs of care through market-oriented strategies, professional self-regulation, intra-organizational process improvement approaches, third-party strategies, and government regulation; and system reform.

MPH 619: Survey of the U.S. Health Care System

This course is an Analysis of current organizational arrangements and patterns for provision and financing of medical care services in the United States. Topics include the medical care process and factors which affect need, access and use of services; factors affecting supply and distribution of health professionals and health facilities, and current issues pertinent to these health care services; factors related to health care costs; quality assessment and assurance; and financing of care through health insurance and governmental programs.

MPH 607: Organization and Management of Healthcare Systems

This course is one of two MPH courses that fulfills the organization theory/management degree requirement. These courses provide knowledge of the theories of organizations, the use of leadership, management processes, and organizational structures and outcomes. Specific topics include governance, strategic management and marketing, human resources management, and process improvement. This course is designed for future managers and leaders of health care organizations and those who expect to have extensive involvement with them from the perspective of buyers, insurers, or policy makers. The course provides students with knowledge about how the best health care provider organizations deliver high quality, cost effective health care, how they respond to their environment, and how they reach and implement decisions about future activities.

MPH 608: Organization and Management of Health Advocacy and Community-Based Nonprofits

This course is one of two HMP courses that fulfills the organization theory/management degree requirement. These courses provide knowledge of the theories of organizations, the use of leadership, management processes, and organizational structures and outcomes. Specific topics include governance, strategic management and marketing, human resources management, and process improvement. Nonprofit advocacy and community-based organizations face unique challenges related to their mission and ownership, including a greater need to motivate employees through culture and to integrate volunteers into the workforce and to manage complex stakeholder relations within communities. All this must be done with scarce resources and frequently, small budgets and workforces. This course includes analysis of the goals, environmental conditions and organizational structures of nonprofit health organizations, including a variety of smaller (and largely, non-medical) community-based nonprofits. Examples of the best managerial practices for these types of organizations and of commonly known NGOs and other nonprofits are used throughout the course.

MPH 615: Health Care Financial and Managerial Accounting

This course focuses on concepts and techniques of managerial accounting for generalist health care administrators. It also provide an overview of financial accounting for students interested in health care management and policy: Topics covered include full cost measurement, differential cost measurement and analysis, sources of revenue, price setting, budgeting and control, costs and decision-making fund accounting

MPH 610: Corporate Finance for Health Care Administrators

Corporate finance theory and applications to health care organizations. Topics include the capital expenditure decision, the capital financing decision, financial feasibility, financial planning, cash management, and financial aspects of prepayment programs. The course makes extensive use of case studies.

MPH 611: Health Information Technology

Health information technology (HIT) is a strategic tool for modernizing the healthcare delivery system in the U.S. This one-credit introductory course will prepare students with a basic understanding of major HIT applications and essential skills of managing them. Main topics include: (1) an introduction to electronic health records, computerized prescriber order entry, and computerized clinical decision-support; (2) federal initiatives for accelerating the widespread adoption of HIT; (3) anticipated benefits and known unintended adverse consequences; and (4) methods for evaluating HIT success.

MPH 604: Cost-Effectiveness Analysis in Health

This course focuses on the use of cost effectiveness analysis to inform decisions about improving health. The course also covers a number of related analytical tools such as cost benefit analysis, decision analysis, and sensitivity analysis. Students will learn theoretical justifications for these tools as well as their limitations. The main goal is for students to understand when cost effectiveness analysis and related tools are appropriate and how to apply them in practice to a broad range of health issues.

MPH 603: Medical Management of Disease

Basic introduction to how disease is conceptualized and managed under the medical model. The course includes an introduction to medical terminology and disease taxonomy, and a basic introduction to issues in disease natural history, progression, prognosis, and diagnostic and therapeutic decision making and management relevant to non-medical health services professionals epidermiology of diseases of public health importance.

MPH 606: Introduction to Public Health Policy and Advocacy

Describes the nature of public policy interventions within the various domains of public health, the theoretical motivations for undertaking them, the influence of the political, bureaucratic, and social environmental in which policy decisions are made, the consequences of such decisions, and the key dimensions of analysis of the effects of public health policies. In addition to conceptual discussion of each of the above, the course includes evaluation of several case studies of public health policy decisions and their implications. The course will also train students to develop effective advocacy strategies, present those strategies through written and oral communication, and refine their professional skills. Students will work with local public health organizations and function as the organizations' advocates.

MPH 609: Principles and Practice of Preventive Medicine

This course is intended to introduce preventive medicine residents and graduate students to the principles of preventive medicine and public health via a seminar approach. The goal of this course is to introduce preventive medicine residents and public health graduate students to the principles of preventive medicine and public health via a seminar approach. Course Objectives (course competencies): 1.Individual seminars are facilitated by residency physician faculty and other invited physician faculty who provide guidance and oversight to the presenting resident for a given session. 2. Students will develop presentations that are based on peer review papers selected by the residents who also facilitate the participation of non-physicians enrolled in the course. 3. Students will present on topics including, but not limited to, emerging infectious diseases, cancer epidemiology, public health policy, preventive health services and management, immunizations, cardiovascular disease, and genomics.

MPH 617: Seminar Presentations in Public Health Issues

This course will cover aspects in epidemiology, recent topics in public health, professional development in public health etc. It will be covered in the form of seminar presentations and will involve professional in the fields. Students will be given topics to research and present.

MPH 698: Master's Thesis

Prior to graduation, a student must and defend a research thesis

MASTER OF SCIENCE IN NURSING (MSN)

Programs Objectives

The Master of Science in Nursing at Saint Monica University provides the opportunity to develop a profound imaginative understanding and appreciation of the theory and practice of nursing. Through this program, graduates are prepared to assume responsibilities as nurse specialists, consultants, educators, administrators in a wide variety of professional settings On Completion of the two year MS Nursing program, the graduate will be able to: Utilize/apply the concepts, theories and principles of nursing science; Demonstrate advance competence in practice of nursing; Practice as a nurse specialist; Demonstrate leadership qualities and function effectively as nurse educator and manager; Demonstrate skill in conducting nursing research, interpreting and utilizing the findings from health related research.

Career Prospects

Nurses who graduate with an MSN degree, with a focus on clinical care (Nurse Practitioner), are called Advanced Practice Registered Nurses (APRN). APRN is an umbrella term which encompasses four distinct career paths: nurse practitioner, certified nurse anesthetist, clinical nurse specialist, and certified nurse mid-wife. However, an MSN degree can also prepare students for jobs in nursing education, research, and healthcare business management. These careers often include such titles as Clinical Nurse Leader, Nurse Administrator, Nurse Educator, and Nurse Manager. These areas of specialization offer unique opportunities in healthcare and provide graduates with a wide range of employment possibilities. Below you will find information on each practice's potential salary and job outlook

Program Structure

To earn the MSN, one has to take all the core and concentration courses and any earn at least a total of at least 120 credit.

Program Structure

Core courses

MPH 610: Legal and Ethical Issues for Health Professionals

NUS 601: Advanced Nursing Practice Theory

NUS 603: Advanced Patho-pharmacology

NUS 605: Advanced Health Assessment, Health Maintenance and Health Promotion

NUS 602: Professional Advanced Practice Role Development & Health Care Issues

NUS 604: Advanced Family Health Theory

Concentration Courses for Nurse Practitioner

NUS 607: Clinical Management of Selected Common Health Conditions in Children

- NUS 606: Occupational and Environmental Health
- NUS 608: Advanced Mental Health Nursing

NUS 610: Clinical Management of Selected Common Health Conditions in Adults

NUS 693: Clinical Practice (Internship)

NUS 698: Master's Thesis in Nurse Practitioner

STRUCTURE OF MSc. NURSING CURRICULUM IN SEMESTERS SEMESTER 1 YEAR ONE

Course	Course Title	Credit	L	Т	Р	Total
Code		Value	(contact)	(guided study)	(practice)	
MPH 607	Organization and Management of	6	40	10	10	60
	Health Care Systems					
NUS 601	Advanced Nursing Practice	6	40	20	0	60
	Theory					
NUS 603	Advanced Patho-pharmacology	6	40	20	0	60
NUIG 60.5			10	20	0	60
NUS 605	Advanced Health Assessment,	6	40	20	0	60
	Health Maintenance and Health					
	Promotion					
NUS 607	Clinical Management of Selected	6	40	20	0	60
	Common Health Conditions in					
	Children					
-						
NUS 609	Legal and Ethical Issues for	6	40	20	0	60
	Health Professionals					
Total		36	240	120	200	380

SEMESTER 2 YEAR ONE

Course		Credit	L	T (guided	Р	Total
Code	Course Title	Value	(contact)	study)	(practice)	
BIO 602	Advanced Research Methods &	6	40	20	0	60
	Statistical Analysis					
NUS 602	Professional Advanced Practice Role	6	40	20	0	60
	Development & Health Care Issues					
	_					
NUS 604	Advanced Family Health Nursing	6	40	20	0	60
MPH 606	Environmental &	6	40	20	0	60
101111000	Occupational Health	0	40	20	U	00
NUE COO	A dwar and Mantal Haalth Nursing	6	40	20	0	60
NUS 008	Advanced Mental Health Nursing	0	40	20	0	00
NUS 610	Clinical Management of Selected	6	40	20	0	60
	Common Health Conditions in					
	Adults					
Total		36	240	120	0	360

SEMESTER I YEAR TWO

Course	Course Title	Credit	L	T (guided	P	Total	
Code		Value	(contact)	study)	(practice)		
ENT 600	Business Entrepreneur	3	20	10	0	30	
NUS 693	Clinical Practice	24	0	0	200	600	
	(Internship)						
Total		28	30	10	200	600	

SEMESTER II YEAR TWO

Course		Credit	L	T (guided	Р	Total
Code	Course Title	Value	(contact)	study)	(practice)	
NUS 698	Thesis in Nurse Practitioner	32	0	0	200	600
Total		32	0	0	200	600

Course Description

NUS 609: Legal and Ethical Issues for Health Professionals

This course presents an overview of the legal issues facing the healthcare industry with some inferences on Cameroon. It provides students with a basic working knowledge of health law and Professional ethics. It is a comprehensive and inclusive review of a wide variety of health care legal issues. Students are provided with a realistic knowledge of health law and its application to the real world. At the end of this course, students are expected to validate the online institutional review board (IRB) training course on ethical issues in health research at the National Institute of Health (NIH)(https://phrp.nihtraining.com/users/login.php).

NUS 601: Advanced Nursing Practice Theory

This course is design to help the student develop an understanding of the concepts of the theoretical basis of the nursing profession as well as the legal and ethical aspects. By the end of this course, the student must be able to: Describe and analyze the development of nursing as a profession; Discuss ethical, legal, political and economic aspects of health care delivery and nursing practice; analyze the laws and regulations in specific countries and their impact on nursing practice; Discuss concepts, theories, models and approaches relevant to nursing and their application; Describe the scope of nursing practice; Provide holistic and competent nursing care using the nursing process; Perform the extended roles of the nurse; Demonstrate an understanding of the complexities of clinical decision-making; Describe latest trends in nursing and the basis of current nursing practice; Identify the scope of nursing research; Use technology in patient care delivery system and nursing practice; Appreciate the importance of continuing professional development

NUS 603: Advance Patho-pharmacology

This course is aimed at enhancing students understanding of the concepts and principles of pathophysiology and drug therapy that will support clinical decision making about the diagnosis and treatment of acute and chronic presentations commonly managed by nurse practitioners. Emphasis is placed on pharmacologic and pathophysiologic principles and pathophysiology of body system with the pharmacologic agents used in the management of diseases of those body systems. Using a case-based approach students apply what they have learned to clinical scenarios depicting client presentations that students are likely to encounter in their clinical placements and in their practices as entry-level nurse practitioners.

NUS 605: Advanced Health Assessment, Health Maintenance and Health Promotion

The aim of this course is to enhance the student's skills in comprehensive history taking techniques, physical assessment and recognition of pathological changes in a client so as to guide decision making in planning appropriate care of the client. This course includes the comprehensive history, physical and psychological assessment of signs and symptoms, pathophysiologic changes, and psychosocial variations of the client: the individual, family, or community. The purpose of this comprehensive assessment is to develop a thorough understanding of the client in order to determine appropriate and effective health care including health promotion strategies effective health care including health promotion strategies.

NUS 602: Professional Advanced Practice Role Development & Health Care Issues

This course aims to assist students to deal with legal, ethical and professional issues in relation to their role as advanced nurse practitioners. This course shall equip them with the ability to: Describe the relevant legal, ethical and other codes of practice impinging on nursing; Analyze the laws and regulations in Cameroon and their impact on nursing practice; Criticize professional issues in nursing practice; Practice responsibility and accountability in nursing; Critically analyze the issues of power and professionalism in nursing practice; Review the role of the newly qualified nurse practitioner in the context of management skills; Differentiate between different ways of knowing; Demonstrate ability to critically appraise reports; Explore issues of reflective practice and evidence based practice; Critically examine the use of evidence in daily practice; Undertake an advanced and sophisticated search of the literature; Critically analyze the literature in light of its contribution to clinical practice; Demonstrate knowledge and understanding of policies and legislation which impact on nursing practice and of their implications for nursing practice; Ensure that the rights of patients, and of their families and/or careers are protected; Demonstrate a willingness to explore proposed changes in nursing practice in a positive manner and an awareness of barriers to change

CONCENTRATION COURSES

NUS 607: Clinical Management of Selected Common Health Conditions in Children

This course aims at enhancing student's knowledge on diagnosis and management of pediatric problems. Students should be able to: Appreciate the history and developments in the field of child health and child health nursing as a specialty; Apply the concepts of growth and development in the management of the child clients and their families; Appreciate the child as a holistic individual; Perform physical, developmental, and nutritional assessment of child clients; Apply nursing process in the management of neonates & children; Integrate the concept of family centered pediatric nursing care with related areas such as genetic disorders, congenital malformations and long term illness; Recognize and manage emergencies in neonates and children; Describe and use various recent technologies and treatment modalities in the management of high risk neonates; Appreciate the legal and ethical issues pertaining to child health nursing; Recognize the role of pediatric nurse practitioner and as a member of the pediatric and neonatal health team; Teach child health nursing to undergraduate students & in-service nurses.

NUS 604: Advanced Family Health Nursing

This course aims to develop the student's skills in the management of the family client. Students will gain skills that will permit them: Educate families on family planning methods; Describe the sub cultural influences on child development in the areas of socialization, education and inspiration.; Describe how health and religious beliefs affect health practices of families; Describe and assist clients manage the role transition experienced by new parents; Explain various parenting behaviors such as parenting styles, disciplinary patterns, and communication skills.; Use communication strategies when communicating with family members of different age-groups; Perform structural and functional assessment of the family; Assess the nutritional status of a family; Promote the family's optimal

adjustment to the child's chronic disorder; Outline nursing interventions that support parents and siblings during a child's illness and hospitalization; Manage the terminally ill and the dying client and his family; Care for the dead and the bereaved.

NUS 608: Advanced Mental Health Nursing

Advanced Mental Health Nursing is designed to assist students in developing expertise and in depth knowledge in the field of mental health nursing. It will also help students to appreciate the patient as a holistic individual and develop skill in the management of mentally ill clients. Students should be able to: Appreciate the trends and issues in the field of psychiatry and mental health nursing; Explain the dynamics of personality development and human behavior; Describe the concepts of psychobiology in mental disorders and its implications for mental health nursing; Demonstrate therapeutic communications skills in all interactions; Demonstrate the role of psychiatric nurse practitioner in various therapeutic modalities; Establish and maintain therapeutic relationship with individual and groups; Uses assertive techniques in personal and professional actions; Promotes selfesteem of clients, others and self; Apply the nursing process approach in managing patients with mental disorders; Describe the psychopharmacological agents, their effects and nurses role; Describe various types of alternative system of medicines used in psychiatric settings; Ménage clients with some mental health disorders at the end of the course.

NUS 610: Clinical Management of Selected Common Health Conditions in Adults

This course is designed to assist students in developing expertise and in depth knowledge in the field of adult health nursing. It will also help students to appreciate the patient as a holistic individual and develop skill in the management of adult clients. By the end of this course, students should be able to: Appreciate the trends & issues in the field of adult health nursing as a specialty; Apply concepts & theories related to health promotion; Appreciate the client as a holistic individual; Perform physical, psychosocial assessment of adult patients; Apply Nursing process in providing care to patients; Integrate the concept of family centered nursing care with associated disorder such as genetic, congenital and long-term illness; Recognize and manage emergencies with adult patients; Describe various recent technologies & treatment modalities in the management of critically ill adult patients; Appreciate the legal & ethical issues relevant to adult health Nursing.

NUS 693: Clinical Practice (Internship)

Clinical exposures are a vital part of the curriculum providing part of the learning experience. Attachments will be arranged for clinical practice according to the demands of each course. Students on attachment will be provided with specific learning outcomes and skills booklets that direct teaching and learning processes. Attachments may be at the teaching, regional and district hospitals, urban and rural community health centers including village health posts.

NUS 698: Master's Thesis in Nurse Practitioner

The aim of this course is to further develop the student's knowledge of the principles of research and to apply this to midwifery practice. By the end of this course, the student will be able to: Critically discuss a research paper; Analyze different sources of information and apply as appropriate to practice; Seek out and interpret relevant statistical data and research of relevance to advanced nursing practice; Set measurable outcomes for advanced practice; Maintain accurate, clear and timely records; Maintain confidentiality of data; Utilize knowledge and information gained through the practice of nursing in an ethical manner; Demonstrate competence in conducting health related research; Write, present, interpret and utilize health related research; Examine and suggest strategies that may enhance the utilization of research in practice.

MASTER OF SCIENCE IN PHYSICIAN ASSISTANT (MSPA)

Physician assistants (PAs) are medical providers who are licensed to diagnose and treat illness and disease and prescribe medication for patients under the supervision of a physician. In the primary care setting, PAs can provide almost all of the clinical services that physicians provide, including performing physical exams, diagnosing and treating illnesses and prescribing medications. Thousands of people in developed countries like US and UK have access to quality health care because of the availability of PAs in their communities. Basically, SMU-Master of Science in Physician Assistant studies is 2-year program comprising of two phases i.e didactic and clinical.

Program Objectives

The goals of SMU PAS program are to:

- i) Establish a sound PA program in compliance with accreditation standards capable of producing high quality healthcare providers.
- ii) Contribute to the provision of high quality, compassionate healthcare to meet growing demand for primary care services, particularly to underserved populations.
- iii) Provide a technologically-proficient teaching and learning environment.
- iv) Provide a competency-driven, practice-based training experience for students.

Career Prospects

They examine, diagnose, and treat patients. Employments opportunities are available in hospitals and other healthcare settings.

Program Structure

To earn a Master of Science in Physician Assistant (MSPA), a student must fulfill the necessary requirements in both the didactic and clinical phases and earn a total of at least 100 semester credit hours.

Didactic Phase (52 credits)

BIO 602: Advanced Research Methods and Statistical Analysis

PAS 601: Principles of Physician Assistant Practice

NUS 609: Legal and Ethical Issues for Health Professionals

MMP 610: Medical Microbiology

PAS 603: Human Anatomy

PAS 602 : Physiology and Pathophysiology

PAS 605: Pharmacology and Pharmacotherapeutics

PAS 604: Clinical Medicine

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PAS 608 Patient History and Physical Examination

PAS 650: Pediatrics and Women's Health

PAS 655 : Principles of Surgery

PAS 660: Principles of Emergency Medicine

Clinical Phase (48 credits)

PAS 611	Internal Medicine
	internal meaterne

- PAS 613 : Emergency Medicine
- PAS 615 : Surgery
- PAS 617 : Pediatrics

PAS 619: Obstetrics and Gynecology

PAS 621 : Family Medicine

PAS 623 : Behavioral and Mental Health

PAS 625: Infectious Disease

PAS 693 : Selective Clinical Rotation

PAS 696: Comprehensive Examination

PAS 698: Thesis

STRUCTURE OF MSc. PHYSICIAN ASSISTANT CURRICULUM IN SEMESTERS SEMESTER 1 YEAR ONE

Course		Credit	L (contact)	T (guided	Р	Tota
Code	Course Title	Value		study)	(practice)	1
	Medical Microbiology	6	40	20	10	60
NUS 609	Legal & Ethical Issues	6	40	20	0	60
	101 Health Floressionals					
PAS 601	Principles of Physician Assistant Practice	6	30	10	0	40
PAS 603	Human Anatomy	6	30	10	0	40
PAS 605	Pharmacology and Pharmacotherapeutics	6	30	10	0	40
PAS 607	Genetics and Diseases	6	30	10	0	40
PAS 609	Principles of Surgery	6	30	10	0	40
Total		42	240	90	10	320

Course Code	Course Title	Credit Value	L (contact)	T (guided study)	P (practice)	Total
BIO 602	Advance Research Methods and Statistical Analysis	4	30	10	0	40
PAS 602	Physiology and Pathophysiology	4	30	10	0	40
PAS 604	Clinical Medicine	4	30	10	0	40
PAS 608	Patient History and Physical Examination	4	30	10	0	40
MPH 608	Organization and Management of Health Advocacy and Community base non profits	6	40	20	0	60
PAS 610	Pediatrics and Women's Health	4	30	10	0	40
PAS 612	Principles of Emergency Medicine	4	30	10	0	40
Total		30	260	100	0	360

SEMESTER 2 YEAR ONE

SEMESTER 1 YEAR TWO

Course		Credit	L (contact)	T (guided	P (practice)	Total
Code	Course Title	Value		study)		
PAS 611	Internal Medicine	4	0	0	120	120
PAS 613	Emergency Medicine	4	0	0	120	120
PAS 615	Surgery	4	0	0	120	120
PAS 617	Pediatrics	4	0	0	120	120
PAS 619	Obstetrics and Gynecology	4	0	0	120	120
PAS 621	Family Medicine	4	0	0	120	120
PAS 623	Behavioral and Mental Health	4	0	0	120	120
PAS 625	Infectious Disease	4	0	0	120	120
Total		32	320	160	960	960

SEMESTER II YEAR TWO

Course		Credit	L	T (guided	Р	Total
Code	Course Title	Value	(contact)	study)	(practice)	
PAS 696	Comprehensive Examination	6	0	0	60	60
PAS 698	Thesis	24	0	0	240	240
Total		30	0	0	300	300

COURSE DESCRIPTIONS

BIO 602: Advance Research Methods and Statistical Analysis

This course provides an overview of the research process and evidence-based health care research. The theories of scientific method and research designs are emphasized. Topics include critical literature evaluation, research theory, measurement, design, statistical analysis, interpretation and reporting. Small group sessions with research advisers emphasize practical application of research concepts and foster project development. The class emphasizes the practical utilization and application of the evidence-based approach to the appraisal of discipline-specific literature.

PAS 601: Principles of Physician Assistant Practice

This course introduces the physician assistant profession, including local, state, and national professional organizations and roles. Current licensure, certification, and recertification requirements are described, as well as issues facing the PA profession. The first half of the semester is devoted to examination of the history and evolution of the PA profession, current PA practice demographics and regulations, principles of quality assurance, risk management, and medical literature evaluation. The second half of the semester is devoted to the study of the ethical dimensions of PA practice. Topics include moral principles and ethical theories, as well as a series of seminar discussions on contemporary ethical issues confronting primary care providers in the 20th and 21st centuries.

NUS 609: Legal and Ethical Issues for Health Professionals

This course presents an overview of the legal issues facing the healthcare industry with some inferences on Cameroon. It provides students with a basic working knowledge of health law and Professional ethics. It is a comprehensive and inclusive review of a wide variety of health care legal issues. Students are provided with a realistic knowledge of health law and its application to the real world. At the end of this course, students are expected to validate the online institutional review board (IRB) training course on ethical issues in health research at the National Institute of Health (NIH)(https://phrp.nihtraining.com/users/login.php).

MMP 610: Medical Microbiology

Medical Microbiology orients students to the clinical applications of microbiology and is tailored to meet the needs of the Physician Assistant profession, presenting information basic to clinical practice. Students become familiar with the role of microorganisms in human diseases. The interactions of microorganisms with humans are highlighted, as well as the physical and chemical control of microorganisms.

PAS 603: Human Anatomy

This course is an intensive study of human gross anatomy and its correlations to clinical medicine. The knowledge gained from this experience leads the student to develop a fine appreciation for not only the structure of the human body, but also the interrelation of its parts, and exposure to clinical medicine from the anatomical perspective. Clinical correlation workshops with cases are included within the modules and discussion sections of this course to provide a clinical context for the learning of gross anatomy. Computer software is used to facilitate learning of anatomic structures and

relationships. Throughout this course, instructional emphasis is placed on structure/function relationships and the clinical applications of such knowledge. The course relies on many independent and group study activities adapted for the goal of helping each member of the class to become a lifelong learner. An additional goal of this format is the Physician Assistant-patient relationship, as students begin to develop the behaviors and attitudes of a medical professional.

PAS 602: Physiology and Pathophysiology

This course orients students to the clinical applications of physiology and pathologic states of diseases. The course is tailored to the needs of the Physician Assistant profession, while presenting information basic to clinical practice. Students become familiar with the pathophysiologic basis of signs and symptoms of various diseases. The course emphasis is mainly on pathophysiologic mechanisms related to several common disorders of various body systems, and parallels lecture topics in Clinical Medicine and Pharmacology and Pharmacotherapeutics. Integration of lectures, visual aids, and case studies aids students in learning the concepts of pathophysiology and their clinical application.

PAS 605: Clinical Pharmacology and Pharmacotherapeutics

This course is designed to prepare students for the pharmacological requirements of practice as a primary care physician assistant. Emphasis is placed on a description of drug categories, prescription writing, drug abbreviations and equivalents, principles of drug research, the laws on ethics of drug use in primary care medicine, utilizing of specific drugs and drug combinations for specific diseases, and performing literature reviews on current pharmacological problems. A research paper and presentation is required addressing a specific pharmacological problem that occurs in primary care physician assistant practice.

PAS 604: Advanced Clinical Medicine

This course offers a systematic study of the epidemiology, presentation, differential diagnosis, diagnosis, and management of disease processes based on the most current diseases which include Dermatology, Otolaryngology, Infectious Disease, Hematology/Oncology, Cardiology, Pulmonology, Gastroenterology, Renal Medicine, Geriatrics and Rheumatology. In each part, Clinical Medicine's content is coordinated and integrated with the content in Physiology and Pathophysiology, and Pharmacology and Pharmacotherapeutics.

PAS 607: Genetics and Diseases

Genetics and Disease assists physician assistant students in understanding the genetic basis of disease. The course is tailored to the needs of the Physician Assistant profession, while presenting information basic to clinical practice. Students become familiar with basic genetics and the basic principles of Mendelian genetics. The course explores the etiology, inheritance pattern, and treatment of various genetic disorders, which are commonly encountered in clinical practice. Information on modern diagnostic tools and the techniques used in medical genetics are presented. The course also investigates teratogens and their underlying principles. Students will appreciate the basic principles of gene therapy, as well as the ethical, legal and social issues associated with genetic testing.

PAS 608: Patient History and Physical Examination

In this course, students learn how to do a complete (comprehensive) history and physical examination, a directed (focused) history and physical examination, as well as the history and physical examinations relating specifically to the pregnant patient, the pediatric patient, and the geriatric patient. Students are introduced to critical thinking and problem solving with a case-based learning lab exercise every week. In addition to the lecture and laboratory sessions, students perform histories and physicals on consenting patients in regional medical facilities.

PAS 6: Clinical Laboratory Medicine and Applications

This course provides students with a concise, practical guide on which laboratory tests are ordered, along with their clinical significance. The course guides students through what tests to order, the significance of specific abnormalities, lab errors, how results might impact differential diagnoses, and how the results impact the treatment plan.

PAS 610: Pediatrics and Women's Health

This course orients students to the practical aspects of diagnosis and patient management of the pediatric and female populations. Students become familiar with disease prevention, health promotion, evidence-based medicine, diagnosis, and treatment in these two patient populations. The unit on pediatrics introduces students to the routine health maintenance and common health problems affecting the pediatric patient from the newborn period through adolescence. The lectures focus on health promotion, disease prevention, screening, common illnesses that affect the major organ system, pathology identification, patient education, and counseling for the pediatric patient and his/her family. The unit on women's health focuses on the biological aspects, prevention, early recognition and amelioration of health issues unique to women.

PAS 609: Principles of Surgery

This course prepares the physician assistant student for both the General Surgery rotation, as well as practice as a surgical Physician Assistant. General surgical concepts needed for the PA to function in the general surgical environment, as well as surgical specialties, are presented. The course emphasizes the recognition of surgical problems in general practice. Pre-, intra-, and post-operative care are taught, as well as the various modalities of anesthesia.

PAS 612: Principles of Emergency Medicine

Principles of Emergency Medicine provides the physician assistant student with the knowledge base to diagnosis and manage common emergency conditions. Topics include, but are not limited to, multiple trauma, chest trauma, abdominal pain, burns, shock, and cardiac emergencies.

PAS 6: Internal Medicine Practicum (6 credits)

This eight-week inpatient rotation takes place at the Buea Regional hospital (BRH) and Mount Mary Hospital (MMH). You'll become an integral member of the medical team that includes medical students, interns, residents, and attending physicians. You'll become proficient in gathering medical

data and making tentative assessments and plans as you participate in the management of patients on general medicine wards. This rotation requires overnight calls. Student housing is provided at Scott & White.

PAS 623: Emergency Medicine Practicum (4 Credits)

This four-week rotation in area hospital emergency departments emphasizes the roles and functions of in-hospital emergency care. In high-intensity 12-hour shifts, you'll gain experience in trauma evaluation and management, and learn the medical and surgical aspects of emergency intervention. You'll gain firsthand experience in the management and treatment of patients triaged to urgent care and fast tracks for health care delivery.

PAS 633: Surgery Practicum (4 Credits)

For this four-week rotation will provide you with practical experience with general surgical problems, you'll participate in the management of hospitalized patients seven days a week, including assisting in surgery, preoperative and postoperative care, and daily ward rounds. You'll also attend structured teaching conferences and tutorials.

PAS 643: Pediatrics Practicum (6 Credits)

This six-week outpatient rotation in general pediatrics puts you in touch with well and sick children in the pediatric wards of BRH and MMH. As you participate in ambulatory care, you'll gain a deeper understanding of normal childhood development and become proficient in providing anticipatory guidance to parents and caregivers.

PAS 653: Obstetrics and Gynecology Practicum (6 Credits)

This six-week rotation is divided into two three-week experiences. The first gives you in-depth exposure to the management of labor and delivery. The second, focused on outpatient gynecology, gives you experience in well-woman gynecologic exams, family planning, and outpatient prenatal and postpartum care.

PAS 663: Family Medicine Practicum (6 Credits)

This six-week rotation gives you practical outpatient care experience in a primary care setting. You'll deliver acute care and continuing care and address health maintenance issues in partnership with your supervising internal medicine or family practice physician. During this rotation, you'll demonstrate evidence-based medicine practice skills and complete an evidence-based research project.

PAS 673: Behavioral and Mental Health Practicum (4 Credits)

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This four-week rotation in L'hopital Jannot, Yaounde will offer you opportunities to obtain practical experience and assume patient-care responsibilities in the continuing care of patients in a psychiatric setting. Students study the basics of DSM-IV diagnostic criteria and psychiatric nosology, and the clinical presentation and treatment of psychiatric disorders.

PAS 683: Infectious Disease Practium (4 Credits)

This four-week rotation offers the student the opportunity to experience the evaluation and treatment of patients infected with HIV and other infectious diseases. The student is directly involved in the multidisciplinary approach and management of patients diagnosed with infectious diseases in both inpatient and outpatient settings.

PAS 693: Selective Clinical Rotation (4 Credits)

This four-week rotation gives you a chance to focus on a medical or surgical subspecialty that has special appeal for you. Your options include adolescent medicine, allergy/immunology, bariatric surgery, dermatology, hematology, internal medicine, nephrology, orthopedics, rheumatology, surgery, trauma care and urology. At the end of this rotation, student will write a comprehensive examination.

PAS 696: Comprehensive Examination (4 Credits)

A comprehensive examination is taken at the end of the training. This examination is done upon completion of the didactic phase and the clinical phase. Student are required to pass this examination before they can present their research thesis and subsequently certification.

PAS 698: Thesis (4 credits)

You must complete a satisfactory thesis to be awarded a Master's degree. This piece of work, undertaken in the last semester gives you the opportunity to apply the techniques and theories you have learned during the didactic and practical phases. Thesis topics reflect the expertise of your lecturers and you may be asked to choose from a list of options. Supervision often starts with small groups of students studying similar topics meeting with their supervisors, who then guide students in deciding on the focus for their individual dissertations. The dissertation itself normally consists of a literature review followed by a piece of empirical work, involving either qualitative or quantitative research

THE DEPARTMENT OF ALLIED HEALTH SCIENCES (MEDICAL LABORATORY)

- 1) Bachelor of Medical Laboratory Science
- 2) Bachelor of Pharmacy Technology
- 3) Master of Medical Microbiology and Parasitology

BACHELOR OF MEDICAL LABORATORY SCIENCE

Generally, every undergraduate student requires at least 180 credits to earn a bachelor's degree in SAEH. Each program is divided in to three categories of courses – for the sake of emphasis; this applies to all the programs in the school.

Graduation Requirements

At least 180 credits

- General Education Courses 18
- Core Courses 108
- Concentration Courses 54

GENERAL EDUCATION COURSES

All SMUHI undergraduate students are expected to take the General Education Courses (General University Requirements) irrespective of their Schools or majors. All our graduates must earn at least 18 credits in the form of General Education Courses. In order to meet the General Education requirements for graduation, these 18 credits must come from four principal areas – Arts, languages, Humanities, Social Sciences and Sciences depending on its relevance to the program under study. These General Education credits can either be earned on campus or transferred from other institutions or programs. For instance, SMHI will award 8 credits for any course passed at the GCE A-Level, considering that the A-Level is the equivalence of Advanced Placement courses.

The General Education Courses will be taken during the first two years of undergraduate studies at SMHI (Freshmen/women and Sophomore Years). Students bringing in about 9 or more credits should be able to complete the General Education requirements within one year. Those who don't complete these General Education requirements within the first year will be required to take compulsory summer sessions so as to complete the remaining credits.

Objective of General Education Courses

Experience has shown that people deal with work related challenges that may not necessarily emanate from their educational areas of specialty or concentration. Hence, the purpose of General Education Courses in SMHI is to open students to a variety of work related issues in the fields of Arts, Humanities, Social Sciences and Sciences, that may enable students to handle some problems that may arise from areas beyond students' areas of concentration and specialty. Therefore, general courses are like a light that enables the students to conveniently succeed in their careers.

The following constitute the 14 General Education Courses of which students will be obliged to do 6 of these general courses that knowledge of it are directly or indirectly related to their fields of study.

Course	Course Title	Credits
Number		
SPT 100	Sports & Physical Education	2
FRE 101	Functional French I	3
FRE 102	Functional French II	3
MAT 210	College Algebra	3
SET 201	Introduction to Science and	3
	Technology	
ICT	Computer Information System	3
ENG 101	Use of English I	3
ENG 102	Use of English II	3
ENT 400	Business & Entrepreneurship	3
TOTAL CREDI	TS EXPECTED	26

Bachelor of Science in Medical Laboratory Sciences (BSMLS)

Medical laboratory scientists are trained to work in clinical chemistry, hematology, immunohematology, immunology and microbiology, with various sub-specialties in each of these major areas. The program of study is designed to provide the knowledge and technical skills necessary to qualify an individual for work in a diagnostic clinical laboratory, research, or industry.

Program Objectives

- Graduates will be competent to function as entry-level medical laboratory scientists in any clinical or public health laboratory environment;
- Graduates will demonstrate problem-solving and critical thinking skills;
- Graduates will demonstrate effective written and verbal communication skills;
- Graduates will demonstrate the highest professional and ethical standards;
- Graduates will Collaborates with other professionals within the health care community to assess the changing needs of the medical laboratory, designs solutions to meet the challenges, and monitors the quality of laboratory practice.

Career Prospects

There are many employers, representing many different industries that are interested in the skills, knowledge and competencies of medical laboratory technologists, including:

- Hospitals and clinics
- Federal government (public health laboratories)
- Pharmaceutical or chemical industries
- Biotechnology companies
- Veterinary clinics
- Public or private research laboratories
- Colleges and universities

Program Structure

To be awarded a Bachelor of Science Degree in Medical Laboratory Science (BSMLS), a student must complete the prescribe courses and earn at least 160 credits, with **120** coming from core/concentration courses.

Course code	Course title	Credit value	L (contact)	T(guided study)	P (practice	Tota l
)	
SPT 100	Sports & Physical	2	5	0	15	20
	Education					
SET 201	Introduction to Science and	3	20	10	0	30
	Technology					
FRE 101	Functional French I	3	20	10	0	20
ENG 101	Use of English I	3	20	10	0	20
BIO 201	Anatomy and Physiology I	6	40	20		60
MLS 201	Introduction to Medical	6	40		20	60
	Laboratory Science					
CHM	General Chemistry	6	40	20	0	60
201						
Total		29	185	70	35	20

SEMESTER ONE YEAR ONE

SEMESTER TWO YEAR ONE

Course	Course title	Credit	L	T(guided	P (practice)	Total
code		value	(contact)	study)		
ENG 102	Use of English II	3	20	10	0	30
FRE 102	Functional French II	3	20	10	0	30
BIO 202	Anatomy and Physiology II	6	40	20	0	60
NUS 206	Medical Sociology and Anthropology	6	40	20	0	60
MLS 210	Clinical Specimen Collection, Processing and Handling	6	40	10	10	60
MLS 214	Clinical preceptorship in sample collection, Processing and Handling 2 months	6	0	0	120	120
Total		30	160	70	130	360

SEMESTER ONE YEAR TWO

Course	Course title	Credit	L (contact)	T (guided	P (Practice)	Total
code		value		study)		
CVE 100	Civics and Ethics	3	20	10	0	30
MAT 210	College Algebra	3	20	10	0	30
MLS 301	Laboratory Management and	6	40	20	0	60
	Quality Assurance					
MLS 305	Clinical Virology	6	50	10	0	60
MLS 309	Applied Clinical Virology	6	0	0	0	120
Total		24	85	50	0	130

SECOND SEMESTER YEAR TWO

Course	Course title	Credit	L	T(guide	Р	Total
Code		value	(contact)	d study)	(practice	
ICT 211	Computer Information System	2	20	0	0	20
BCH 310	General Biochemistry	6	40	10	10	60
MLS 310	Immunohematology I (Hematology and Coagulation)	6	40	20	0	60
MLS 304	Clinical Bacteriology	6	40	10	10	60
MLS 330	Applied Clinical Bacteriology	6	0	0	120	120
MLS 320	Applied Clinical Hematology and Coagulation	6	0	0	120	120
Total		32	140	40	250	430
First sem	ester year three					
Course	Course title	Credit	L	Т	Р	Total
code		value	(contact)	(guided	(practice	
				study))	
MCB	General Microbiology and	6	40	10	10	60
401	Infectious Disease					
BIO 401	Bioethics	6	40	20	0	60
MLS 411	Medical Parasitology	6	40	10	10	60
MLS 425	Immunohematology II	6	40	10	10	60

Blood

and

SEMESTER TWO YEAR THREE

(Immunology

Clinical Biochemistry

Banking)

MLS 415

Total

Course	Course title	Credit	L	Т	Р	Total
code		value	(contact)	(guided	(practice)	
				study)		
BIO 402	Fundamentals of Research	6	40	20	0	60
	Methods & Statistical Analysis					
MLS 406	Medical mycology	6	40	10	10	60
MLS 410	Histology and Cytology	6	40	10	10	60
PHA 420	Clinical Pharmacology	6	40	20	0	60
	&Pharmacotherapeutics					
MLS 422	Clinical preceptorship in	6	0	0	120	120
	Immunology and Blood					
	Banking					
Total		30	160	60	140	360

FIRST SEMESTER FOURTH YEAR

Course	Course title	Credit	L	Т	Р	Total
code		value	(contact)	(guided	(practice	
				study)		
MLS 501	Medical Entomology	6	40	20	0	60
MLS 521	Advanced Medical	6	40	20	0	60
	Laboratory Techniques					
MLS 533	Clinical preceptorship in	6	0	0	120	120
	Clinical Biochemistry					
MLS 543	Clinical Preceptorship in	6	0	0	120	120
	Parasitology and Mycology					
MLS 581	Research Design & Seminar	6	10	0	50	60
	Presentation					
Total		30	90	40	290	420

SECOND SEMESTER FOURTH YEAR

Course	Course title	Credit	L	Т	P (practice)	Total
code		value	(contact)	(guided		
				study)		
ENT 400	Business & Entrepreneurship	4	30	10	0	40
MLS 520	Clinical preceptorship in	6	0	0	120	120
	Histology and Cytology					
MLS 502	Integrated clinical Laboratory	6	40	20	0	60
	Cases					
MLS 598	Medical Laboratory Science	12	0	0	120	120
	Research Project					
Total		28	70	30	240	340

COURSE TITLE: ANATOMY & PHYSIOLOGY I CODE: BIO 201

CREDIT VALUE: 6

Objectives: At the end of the course, students should be able to differentiate and know the relationship between cells, tissues, organs and systems. Also be able to identify and describe discuss all the systems of the human body.

Content: Structures, types, characteristics, functions, Membranes, mucous, sources and synovial

fluids, glands, body cavities and their contents; systems i.e. circulatory hepatic, lymphatic, respiratory, digestive, urinary, reproductive, musculo-skeletal nervous system: special senses: the skin.

Details of the course

A. The Chemical Level of organization

-Cell, cell organelles and functions (organization of a typical cell)

-Movements through cell membranes: osmosis, filtration, diffusion, active transport, phagocytosis, and pinocytosis, cell life, and cell death.

-Nucleic acids and protein synthesis

-Introduction to genetics

B. Structure of Body Cells

-Life cycle of a cell: mitosis, meiosis

-Cell differentiation, control of cell reproduction, cancer, hyperplasia, anaplasia and metastasis

C. Structure of Body Tissues

-Types of tissues, their origins and functions.

-Biopsy, pathology and Martan syndrome

-Membranes and glands

D. Overview of Structure of Body Systems (blood, epithelial, muscular, cardiac etc).

-Life processes: responsiveness, growth, differentiation, nutrition, movement and reproduction

E. Some systems of the body

-Circulatory system

-Digestive system

- -Endocrine system
- -Immune system
- -Integumentary system
- -Musculo-skeletal system
- -Respiratory system

-urinary system

F. Principles of Homeostasis

-Fluid, electrolyte, and acid base homeostasis

-Fluid compartment and fluid balance

-Intracellular and extracellular fluids

-Electrolytes in body fluids: sodium, chloride, potassium, magnesium, bicarbonate, calcium, phosphate

-Acid-base balance, buffer systems, exhalation of carbondioxide, kidney excretion of hydrogen ions, acidosis, alkalosis, regulation of fluid loss, enemas and fluid balance, body water

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: ANATOMY AND PHYSIOLOGY II COURSE CODE: BIO 202 CREDITS - 6

$\mathbf{CREDITS} = \mathbf{6}$

Objectives: This course is a continuation of BIO 201 and At the end of the course, students should be able to differentiate and know the relationship among the respiratory, digestive, excretory, nervous and reproductive systems. Also students should be able to identify and describe all these systems of the human body.

Content

Respiratory system

Structure and functions of respiratory organs

Physiology of respiration

Characteristics of normal respiration and its deviations

Digestive system

Structure and functions of organs of digestion and accessory organs

Process of digestion and absorption.

Metabolism: meaning and metabolism of food constituents

Excretory system

Structure and functions of organs of urinary system

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Structure and functions of skin Regulation of body temperature Fluid and electrolyte balance

Nervous system

Type, structure and functions of neuron.

Central nervous system: structure and functions

Autonomic nervous system: structure and functions.

Sense organs

Structure and functions of eye, ear, nose and tongue.

Physiology of vision, hearing and equilibrium.

Reproductive system

Structure and functions of reproductive and accessory organs.

Process of reproduction, menstrual cycle and menopause

Reproductive health

Structure and functions of male reproductive system

Note: Wherever possible related clinical application should be included in each unit

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: US Government, Politics, & Global Issues COURSE CODE: GEN 220 CREDIT 2 (20HPS)

CREDIT 2 (20HRS)

Democracy in the U.S. is evaluated through analyses of the major institutions, processes and policies of the national government. Power, inequality, political culture, social movements, the Constitution, elections, the role of the media, and the parts played by the President, the bureaucracy, the Congress and the courts are all considered.

Objectives

SMHI is modeled towards and American system of education. Hence this course enables students to situate themselves within the context of the US as a potential place of visit, study or work. Enable students to compare US democracy system with that of other nations and seek to foster the goals of democracy, equality and equity all over the world.

COURSE TITLE: CLINICAL SPECIMEN COLLECTION, PROCESSING AND HANDLING

COURSE CODE: MLS 210

CREDIT VALUE: 6 (60 HOURS)

Objectives:

Thiscourseisdesignedtoteachstudentstheroleofthelaboratoryinproperspecimencollectionandhan dlingofspecimens, standard protocols for collection, handling and processing of specimens for transport or from the laboratory.content: Role of the Laboratoryin Proper Specimen Collection, Standard Protocols for Collection, Transport and Processing of Specimens, Specimenhandling and processing; general rules for handling specimens, specimenreceipt and preliminary observations, labeling of specimens, criteri afor specimenre jection,

microscopicexaminationofdirectmountsforpresumptivediagnoseswhereapplicable,Precautionsf orPackagingand Mailing of Specimens.

Content

-Introduction/purpose

-Specimen containers

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-Role of theLaboratoryinProper SpecimenCollection

-Standard precautions during specimen collection

-Standard Protocols for Collection, handling and processing of:

- Microbiology specimens
- Biochemistry specimens
- Parasitology specimens etc

-Specimenreceiptandpreliminaryobservations

-Labelingofspecimens

-Criteriaforspecimenrejection

-Storage of specimens

-Transport of specimens

-Specimen transport boxes

-Transport of specimen from patient home

-Vehicles used for transporting specimens

-Incident reporting

-Leakages

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: MEDICAL SOCIOLOGY/ANTHROPOLOGY

CODE: NUS 206

CREDIT VALUE = 6

COURSE DESCRIPTION: This course is designed to help the students gain knowledge and comprehend the importance of sociology and anthropology to the nursing profession in order to render effective nursing services

GENERAL OBJECTIVE

Upon completion of the course, the students will be able to relate the importance of sociology and anthropology to the nursing profession.

A. Sociology Specific Content

-Introduction to Sociology

-Notion of anthropology and ethnology

-Evolution of man and life: biological, psychological and social dimension

-Social institutions

-Social Behaviors

-Determinants of Behavior

-The in-born and acquired myths and beliefs

-Norms, Values, Beliefs and Belief Patterns In Relation to Heath

-Culture and cultural phenomena

-Cultural attitudes towards health, illness and death

-Present and alternative past medical practices and traditional medicine

-Sociology and social psychology; Society and stratification.

-Notions of groups: social groups, (families, working groups, institutions); restricted group dynamics; leaders; communication and communication networks

-Social Problems, their Importance to Public Health and their Implication for the Nurse

B. Anthropology; Specific Content

-Definition and basics in anthropology (norms, beliefs and values) ethnology

-Cultures (nature, diversity and uniformity) in health options and marriages

-Influence of culture on health and diseases

-Folk beliefs and its impact on health

-Introduction to traditional medicine

-Medical pluralism, trends in medical pluralism -Folk beliefs and its impact on health Workload: 6 hours per week (60 hours per semester) Evaluation: Test and end of semester examination.

COURSE TITLE: INTRODUCTION TO MEDICAL LABORATORY SCIENCE **COURSE CODE: MLS 201**

Objective

This course is aimed at giving an understanding of the basic organization of the laboratory unit of the health sector, the major equipment, their uses and preventive maintenance of this equipment in the laboratory. It is equally designed to demonstrate basic management concepts required for a manual laboratory.

Content

Chapter One: Laboratory

General overview Classification of medical laboratories Organization of the laboratory Structure of medical laboratory service Role of medical laboratory services Role of medical laboratory technologist Lab. rules, ethics and professional code of conduct Laboratory policies Solutions used in medical Laboratory Expressing concentration of solutions Chapter: Two: Laboratory glass and Plastic wares Laboratory glass wares Plastic wares **Chapter Three: Laboratory instruments Balances** Centrifuges Refrigerators Ovens Water bath Incubators Colorimeter (photometer) Desiccators Instruments and materials used for pH determination Instrument for purifying water Microscope Instruments and materials used for advanced laboratory techniques **Review** questions Automated analyzers **Chapter Four: Sterilization and disinfection** Sterilization Disinfection and decontamination of laboratory wastes **Chapter Five: Laboratory accidents and safety** Laboratory hazards and accidents Factors contributing to laboratory hazards Fires aid for laboratory hazards

Safe use and storage of chemicals and reagents Planning for safety General precautions for the avoidance of laboratory accidents **Chapter Six:** Quality assurance Types and causes of errors in medical laboratories **Work Load:** 6 hours per week (60 hours per semester) **Evaluation:** Tests and end of semester examinations

COURSE TITLE: Clinical Preceptorship in Sample Collection, Processing and Handling

COURSE CODE: MLS 214

Student will spend 40 hours per week in a diagnostic laboratory under the supervision of a medical technologist to familiarize themselves with the general functioning of laboratory, safety measures etc, and to gain practical experiences in clinical sample collection, handling, processing and storage. **Prerequisite: MLS 210**

COURSE TITLE: FUNDAMENTALS OF NURSING CODE: NUS 203 CREDIT VALUE = 6

COURSE DESCRIPTION

This course is designed to help students develop an ability to meet the basic health need of the patients with regard to nursing care and develop skill in the competencies required for rendering effective patient care.

General Objectives

Upon completion of this course, the student will be able to:

- Describe the physical mental and social adjustment required of a sick individual and his family.

- Carry out basic nursing techniques and care with the application of sound scientific principles.

- Explain the concept of comprehensive nursing care.

- Develop skills in assessment, planning, implementation and evaluation of the nursing care rendered to the patients.

- Communicate effectively and establish good interpersonal relationship with the patients, their relatives and other health team members.

- Demonstrate skills in observation, recording and reporting.

- Recognize and utilize opportunities for planning and implementing need based health teaching programme (s) for individuals, groups, families and communities.

Course Content

This content can be structured into different parts as follows

A. Overview of Historical Aspects of Nursing

-The history of nursing

-Current nursing practice – current trends

- -Roles and functions of a nurse
- -Criteria of a profession
- -Nursing as a profession

-Factors influencing current nursing practice in Cameroon and the world.

-Nursing education: Cameroon; its evolution, nursing in UK, USA

B. Integral Aspects of Nursing

-Concept of Nursing, Man, Health illness and death

-Different phases of disease and different dimensions of treatment

-Cultural attitudes to health and diseases

-The Philosophy of nursing, the Nurse and Nursing Care

-Differences between Nursing Care and Medical Care, the role of Florence Nightingale.

-Characteristics of Care: Holistic, Continuous, Integrated Care

-Scientific Approach to Nursing Care

-The notion of basic needs: biological, physiological, psychological and sociological components of the different ages in life.

-Human Needs According To Abraham Maslow and Virginia Henderson

-Conceptual Models of nursing

-Caring, Support, Dignity and Empathy in Nursing; the "nurse's touch".

-Confidentiality in Nursing

Scientific principles in Nursing will include: Theories in nursing, Definitions in Nursing, Nursing as an Art nursing as a science; Human need, and gratification; The hospital ward and its contents, reception of patients, patient lifting, care of the patient's environment, bed making, bed bath, Sitzs baths, process of admission of patient into the hospital, Nursing, interviewing, patient's records, vital signs, overview of drug administration, asepsis/aseptic techniques, care of the terminally ill. Last offices, oxygen administration, scientific principles, Concepts in Physiotherapy.

-Hygienic Needs and Physical needs

- Importance of maintaining good personal and environmental hygiene in health and disease.

- Nurse's role in maintaining good personal and environmental hygiene.

- Care of Skin and Mucous Membrane.

- Bed bath, care of hair, eyes, nose, ears, teeth, genitalia, hands and feet.

-Nutritional needs.

-Importance of diet in health and disease, factors affecting the normal nutrition in sickness, nurse's role in maintaining good nutrition, feeding helpless patients, maintenance of intake and output record.

-Elimination needs

-Problem in sickness: Constipation and diarrhea, retention and incontinence of urine.

-Nurse's role in meeting elimination needseg enema.

-Safety needs

-Environmental hazards, role of nurses in prevention of health hazards.

- Interpersonal relationship, cultural/spiritual/religious needs.

-Activity and Exercises

- Importance of activity and exercise in health and sickness, active and passive exercise.

- Process of admission of patient in to the hospital

-Hospital wards and its content

-Physical Comforts

- Comfort : meaning and its importance in health and disease, factors promoting and inhibiting physical comfort, comfort devices and their uses, body mechanics, positions use in nursing.

-Moving, shifting and Lifting of patient

- Care of pressure points, bed sores: causes, signs, symptoms, prevention and nursing care

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- Shifting of patient from one side to another, from bed to wheel chair and bed to stretcher.

-Assessment of patient / Client

-Principles and importance of assessment, methods of assessment: observation, palpation, auscultation, percussion, developing skill in observation.

-Physical Assessment

- Height, weight, posture, speech

-Physiological Assessment

- Temperature, pulse, respiration and blood pressure

- Characteristics of normal and abnormal (T.P.R. and B.P.) and factors influencing the variations.

-specimen collection; Urine stool, vomit, sputum, normal and abnormal behaviour and its deviation.

- Nursing Process

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination

COURSE TITLE: CLINIICAL VIROLOGY

COURSE CODE: MLS 305

OBJECTIVE: Thiscourseisdesignedtoidentifythedifferenttypesof viral pathogensthatcanbeisolatedfromdifferentbodyspecimens,thedifferentmethodsthatcanbeusedtoi dentifythesespathogensandtoalesserextentantiviraltherapy.Issuestobediscussed:Classification of medicallyimportantviruses, Diagnostictechniquesused in virology, Biochemicaltest used to identifyviruses,viralexamination ofspecimens

Content

UNIT I Definition Morphology and Structure Classification Replication Viral Protein Synthesis Genetics **Host-Cell Reactions** Cell Destruction (Cytocidal Infection, Necrosis) Virus Replication without Cell Destruction (Noncytocidal Infection) Latent Infection Tumor Transformation Carcinogenic Retroviruses ("Oncoviruses") **DNA Tumor Viruses** Pathogenesis **Defense Mechanisms** Nonspecific Immune Defenses Specific Immune Defenses Prevention Chemotherapy Laboratory Diagnosis Virus Isolation by Culturing **Direct Virus Detection** Virus Detection Following Biochemical

Amplification Serodiagnosis. . **DNA Viruses** Viruses with Single-Stranded DNA Genomes **Parvoviruses** Viruses with Double-Stranded DNA Genomes **Papillomaviruses** Polyomaviruses Adenoviruses Herpesviruses Poxviruses Hepadnaviruses: Hepatitis B Virus and Hepatitis D Virus **RNA** Viruses Viruses with Single-Stranded RNA Genomes, Sense-Strand Orientation **Picornaviruses** Astrovirus and Calicivirus; Hepatitis E Retroviruses Human Immune Deficiency Virus (HIV) ViruseswithDouble-StrandedRNAGenomes **Reoviruses** ViruseswithSingle-StrandedRNAGenomes, Antisense-StrandOrientation Orthomyxoviruses Paramyxoviruses Rhabdoviruses Filoviruses (Marburg and Ebola Viruses) Subviral Pathogens: Viroids and Prions Viroids Prions Workload: 6 hours per week (60 hours per semester) Evaluation: Test and end of semester examination.

COURSE TITLE: Clinical preceptorship in Virology COURSE CODE: MLS 309

Students will gain practical concepts in medical virology procedures and data interpretation in a laboratory setting. (Forty hours per week for four weeks at assigned clinical affiliate laboratory). **Prerequisite: MLS 305**

COURSE TITLE: CLINICAL BACTERIOLOGY COURSE CODE: MLS 304 OBJECTIVES

Thiscourse is designed to identify the different types of bacterial pathogens that can be isolated from different body specimens, the different methods that can be used to identify these spathogens and antimicrobial therapy. Issues to be discussed: Classification of medically important bacteria: staphylococci and Related Genera, Streptococci, Enterococci and Related Genera, Neisseria and Branhamella [Moraxella], Grampositiverods, Gramnegativerods especially Enterobacteria and Vibrio, Spirochetes, Mycobacterium, Mycoplasma and Ureaplasma etc. Microscopic technique sused inmicrobiology, Culture of bacteriological pathogens, Biochemical test used to identify bacteria, Bacteriological examination no fspecimens, Antimicrobial susceptibility testing.

UNIT I

Structure of bacteria Classification of bacteria Cultivation of bacteria **Bacterial nutrition** Bacterial growth **Bacterial** genetics Sterilization and disinfection Antimicrobial sensitivity testing **UNIT II** Collection, transport, and examination of specimen **UNIT III: Gram positive cocci** Genus Staphylococci Genus Streptococci Gram positive spore forming rods Genus Bacillus Genus Clostridium Gram positive Non-spore forming rods Genus Corynebacteria Genus Listeria Genus Erysipelothrix **UNIT IV: Gram negative diplococci** Genus Neisseria **UNIT V: Gram negative coccobacilli** Genus Haemophilus Genus Pasteurella **UNIT VI Gram negative rods** Genus Escherichia Genus Enterobacter Genus Salmonella Genus Shigella Genus Peudomonas Genus Vibrio Genus Campylobacter Genus Helicobacter **UNIT VII: Genus Mycobacteria UNIT VIII: Spirochetes** Genus Treponema Genus Borellia Genus Leptospira **UNIT IX: Genus Rickettsia UNIT X: Genus Mycoplasma UNIT XI: Genus Chlamydia UNIT XII** Host-parasite relationship Normal microbial flora Infection of skin and wound Infection of respiratory tract Infection of gastrointestinal tract Infection of urinary tract

Infection of genital tract Infection of blood Infection of central nervous system Infection of bone and joint **UNIT XIII** Bacteriology of water **UNIT XIV** Food Bacteriology **Workload: 6** hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

COURSE TITLE: Clinical preceptorship in Hematology and Coagulation COURSE CODE: MLS 320

This course will provide practical application of theory and concepts in hematology and coagulation with the emphasis on practical experience in all phases of hematology/coagulation testing in the clinical laboratory. (Forty hours per week for four weeks at assigned clinical affiliate laboratory). **Prerequisite: MLS 310**

COURSE TITLE: Clinical preceptorship in Bacteriology COURSE CODE: MLS 330

Students will gain practical concepts in medical bacteriology procedures and data interpretation in a laboratory setting. (Forty hours per week for four weeks at assigned clinical affiliate laboratory). **Prerequisite: MLS 304**

COURSE TITLE: IMMUNOHEMATOLOGY II (IMMUNOLOGY AND BLOOD BANKING) CORSE CODE: MLS 425 CREDIT VALUE: 6 = 60HOURS

COURSE OBJECTIVES

This course is prepared to meet the needs of Medical Laboratory professionals and Blood Bank personnel as it comprise the theories and laboratory techniques concerning blood transfusion service. The course is also important for health professionals in other disciplines as a reference related to blood transfusion therapy.

UNINT I: INTRODUCTION TO IMMUNOHEAMATOLOGY

-Historical Overview of Immunohematology
-Blood Group Genetics
-The Role of H-Gene in the Expression of ABO Genes
-Secretors and Non Secretors
UNIT II: PRINCIPLES OF ANTIGENS AND ANTIBODIES
-Antigens
-Antibodies
CHAPTER III: THE ABO BLOOD GROUP SYSTEM
-The Discovery of ABO Blood Group
-Inheritance of the ABO Groups

-The ABO Blood Group -Antiserum -Manifestations and Interpretation of Ag-Ab Reaction -Techniques **UNIT IV: THE Rh-Hr BLOOD GROUP SYSTEM** -Historical Background of Rh-Hr Blood Grouping -Nomenclature & Genetic Theories -The Antigens of the Rh-Hr Blood Group System -Variants of Rh Antigen -Rhesus Antibodies -The Rh-Hr Blood Grouping Technique **UNIT VI: HAEMOLYTIC DISEASES UNIT V: THE ANTI- GLOBULIN TEST (COOMB'S TEST)** -The Direct Anti- Globulin Test (DAT) -The Indirect Anti- Globulin Test (IAT) -Auto Immune Hemolvtic Anemia (AIH) -Hemolytic Disease of the New Born (HDN) UNIT VII: THE CROSS- MATCH (COMPATIBILITY TESTING) -Purpose of Cross-Match -Types of Cross-Match -Selection of Blood for Cross-Match -Procedure for Cross-Match **CHAPTER VIII: THE DONATION OF BLOOD** -Selection of Blood Donors -Collection of Blood -The Anticoagulants and Storage of Blood and Blood Products -Potential Hazards During and after Blood Collection **UNIT IX: THE TRANSFUSION REACTION** -Types of Transfusion Reaction -Laboratory Tests to be Done When Transfusion Reaction Occurs UNIT X: BASIC QUALITY ASSURANCE PROGRAM IN BLOOD BANKING Workload: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

COURSE TITLE: Clinical preceptorship in Immunology and Blood Banking COURSE CODE: MLS 422:

The student will spend 40 hours per week for 4 weeks in the Blood Banking Department of an affiliate laboratory. The time will include both observation and performance of tests under the supervision of a medical technologist. The department traditionally offers practice in blood grouping, antibody screening and compatibility testing for transfusion of blood products. However, the affiliate laboratory may combine serology in any of the other departments, leaving the fifth week for a choice of weekend, evening or a special rotation of the student and instructor's choice. **Prerequisite: MLS 425**

COURSE TITLE: CLINICAL PHARMACOLOGY & PHARMACOTHERAPEUTICS COURSE CODE: PHA 420 CREDIT VALUE = 6 (60 HOURS) OBJECTIVES
This course is designed to prepare students for the pharmacological requirements of practice as a primary care provider. Emphasis is placed on general principles of Pharmacology, drug procurement, storage, distribution, use and control. Autonomic pharmacology and autocoids, antimicrobial agents, Analgesics, an esthetic agents, Respiratory and endocrine pharmacology, euroand psychopharmacology, GIT pharmacology, Drugs acting on blood and bone marrow, Eye, Skin and ENT; Cytotoxic agents and Toxicology. Obstetric Pharmacology. Alternative medicine.

Chapter one: General pharmacology

Introduction Pharmacodynamics Pharmacokinetics Theoretical pharmacokinetics Drug safety and effectiveness Development and evaluation of new drugs Chapter two: Drugs acting on autonomic nervous system Learning objectives Introduction Autonomic drugs Cholinergic drugs Anticholinergics Adrenergic drugs Adrenergic blockers Chapter three: Cardiovascular-renal drugs Learning objectives Introduction Antihypertensive drugs Drugs used in heart failure Pharmacotherapy of angina pectoris Anti-arrhythmics **Diuretics** Drugs used in hypotensive states and shock

Exercise

Chapter four: Autacoids and their antagonists

Introduction Hisamine 5-hydroxytryptamine Prostaglandins **Chapter five: Drugs Action on the Respiratory System** Introduction Pharmacotherapy of bronchial asthma Antitussives **Expectorants & Mucolytics** Decongestants Chapter six: Drugs used in Gastrointestinal Diseases Introduction Drugs used in acid-peptic diseases Purgatives Antidiarrhoeals Antiemetics

Drugs used to induce vomiting (emetics) Antihaemorrhoidal agents Drugs used in inflammatory bowel disease Chapter seven: Drugs used to treat the diseases of blood, inflammation and gout Introduction Agents used in anemias Drugs used in disorders of blood coagulation Nonsteroidalantiinfammatory agents Drugs used in gout Chapter eight: Drugs acting in the central nervous system Introduction General anesthetics Sedative and hypnotic drugs Drugs used in Parkinsonism Antipsychotic drugs Antidepressant agents **Opioid** analgesics **CNS** stimulants Local anesthetics **Chapter nine: Endocrine Drugs** Introduction Antidiabetic drugs **Oxytocics** Female sex hormones and hormonal contraception Adrenocortical hormones **Chapter ten: Chemotherapeutic Agents** Introduction, Antibacterial drugs, Antifungal agents, Antiviral agents, Antineoplastic agents, Treatment of protozoan infection, Treatment of helminthic infections **Chapter eleven:** Toxicology Introduction General measures in poisoning Chapter twelve: Prescription writing and rational use of drugs Introduction, Prescription writing, Rational use of drugs Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: COURSE TITLE: LABORATORY MANAGEMENT AND QUALITY ASSURANCE COURSE CODE: MLS 301 CREDIT VALUE: 6 (60 HOURS)

OBJECTIVE: This course is to provide students with knowledge on the management of health laboratory with an appropriate quality assurance program as a major role in enhancing the standard of health service delivery by the health laboratory.

UNIT I: INTRODUCTION TO MANAGEMENT

-Definition and General Principles

-Concepts of Management

-Function of Management

UNIT II: HEALTH LABORATORY MANAGEMENT

-Definition and Principles

-Role of Laboratory in Health Care and Training of Laboratory Personnel -Code of Conduct **UNIT III: LABORATORY ORGANIZATION** -Introduction -Organization of Health Laboratory Service in Ethiopia -Structure and Function of Laboratory Service in Ethiopia -Safe Laboratory Design UNIT IV: EFFECTIVE COMMUNICATION IN THE LABORATORY -Communication -Guidelines for Effective Communication **UNIT VI: LABORATORY POLICIES** -Definition and Purpose -Laboratory Hours and Emergency Work -Range of Tests to be Performed and Referral of Specimens -Work Load Capacity of the Laboratory -Collection of Specimens -Delivery of Reports -Reporting of Results and Record Keeping UNIT VI: MANAGEMENT OF LABORATORY RESOURCES -Management of Time and Space -Management of Equipment and Supplies **UNIT VII: SAFETY IN THE LABORATORY** -Importance of Safety -Source of Laboratory Hazards -Safety Measures -Preventing Laboratory Infection -Elements of Laboratory Safety Program UNIT VIII: QUALITY ASSURANCE -Introduction -Definition and Purposes of QA -Components of Quality Assurance **UNIT IX: QUALITY CONTROL** -Definition -Types of QC -Assessing Value of Tests Workload: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination. **COURSE TITLE: MEDICAL PARASITOLOGY**

COURSE TITLE: MEDICAL PARASITOLOGY COURSE CODE: MLS 411 CREDIT VALUE: 6 (60 HOURS) Objectives:

Thiscoursedeals with the classification of medically important parasites, their lifecycles, characteristic features, mode of life, clinical manifestations, laboratory examination and identification of these parasites and the different methods of preventing and controlling parasitic infections.

Content

UNINT 1: Evolution of Parasitic Association

Association in organism's classification of the host organism Human helminths infections 111

UNIT 2: Trematodes

Digenetic Trematodes Classification of digenetic trematodes according to their habitat **UNIT 3: Cestodes** Basic body plan of a cestode Tapeworms and Examples Tapeworms of man and other human's cestode **UNIT 4: Nematodes** General features and life cycles of nematodes Soil transmitted helminths Blood and Tissue nematodes Air-borne nematode

UNIT 5: PROTOZOA

Giardia intestinalis, Trichomonasvaginalis, Trypanosoma, Leishmania, Entamoebahistolytica and Other Intestinal Amoebas, Naegleria, Acanthamoeba and Balamuthia, Toxoplasma gondii, Isospora, Cyclosporacayetanensis, Sarcocystis, Cryptosporidium, Plasmodium, Babesia, Microspora, Balantidium coli

UNIT 6: PLATHELMINTHA (SYN. PLATYHELMINTHES)

Trematoda (Flukes)

Schistosoma (Blood Flukes), Fasciola species, Dicrocoelium, Paragonimus(LungFlukes) Cestoda (Tapeworms)

Taenia Species, Echinococcus, Hymenolepis, Diphyllobothrium

UNIT 7: NEMATODA (ROUNDWORMS)

Intestinal Nematodes

Ascarislumbricoides (Large Round worm), Trichuristrichiura (Whipworm), Ancylostoma and Necator (Hookworms), Strongyloides, Enterobius

Nematodal Infections of Tissues and the Vascular System

Filarioidea (Filariae)

Wuchereriabancrofti and Brugia Species, Loa MansonellaSpecies, Onchocerca, Trichinella

Infections Caused by Nematodal Larvae

Larva MigransExternaor Cutaneous Larva, Migrans ("Creeping Eruption"), Larva MigransInterna or, Visceral Larva Migrans.

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: INTEGRATED CLINICAL LABORATORY CASES

COURSE CODE: MLS 502

Crdit value: 6

Thiscourse introduces students to the various disciplines that comprise the medical laboratory and stress sest he importance of approaching diagnostic testing in an interdisciplinary manner.

COURSE TITLE: ADVANCED MEDICAL LABORATORY TECHNIQUE COURSE CODE: MLS 521 CREDIT VALUE: 6

Objectives: it provides students with a comprehensive overview of the various routine diagnostic tests in the diagnosis of infectious diseases.

Course content: The fundamental principles of molecular technology and techniques used in clinical and research laboratories will be covered. Techniques will be addressed in the context of the different areas of the laboratory that use basic and molecular technologies to include genetics, oncology, infectious disease, and identity testing both for forensic purposes and transplant use. Topics include: nucleic acid chemistry, molecular genetics &cytogenetics; nucleic acid extraction and hybridization; target, signal and probe amplification; sequencing, microarrays, and in-situ hybridization techniques, protein techniques: ELISA, ELISPOT, SDS-PAGE, western blotting.

COURSE TITLE: Clinical Preceptorship in Medical Parasitology and Mycology COURSE CODE: MLS 543

Objective: The aim of this course is to equip students with knowledge on parasites of clinical importance and mycoses, their diagnostic methodology and result interpretation.

Content: The student will spend 40 hours per week for four weeks in the parasitology and mycology Department of an affiliate laboratory. The time will include both observation and performance of tests under the supervision of a medical technologist. This department traditionally offers practice in theories related to parasites of medical importance and Mycoses, Basic diagnostic parasitology and mycology methodology, Interpretation of results, both for clinical and infection control purposes, Superficial and deep seated parasitic and fungal infection, Special problems associated with the immunocompromised host, antiphrastic agents, Anti-fungal agents and treatment strategies. **Prerequisite: MLS 411**

COURSE TITLE: GENERAL MICROBIOLOGY AND INFECTIOUS DISEASES COURSE CODE: MCB 401

CREDIT VALUE = 6

Objective: The overall goal of this course is to introduce students to the field of microbiology and emerging infectious diseases.

Content: It will cover a wide range of topics including bacteriology, virology, microbial pathogenicity and epidemiology, body Defense Mechanisms against infection, the pathophysiology and epidemiology of infectious diseases, host-pathogen relationships and the mechanisms behind the emergence of new microbial threats.as well as the pharmacology of antimicrobial and antiviral agents, The intent is to provide an understanding of the medically relevant bacterial, fungal and viral pathogens and the diseases they produce. The emphasis will be on the pathophysiology of these diseases, the nature of host-parasite interactions and the different clinical syndromes caused by these pathogens. It is not the purpose of this course to teach the clinical management and therapy of infectious diseases

UNIT 1: Introduction

Microbiology: What, Why and How? What is microbiology? Why is microbiology important? How do we know? Microbiology in perspective: to the 'golden age' and beyond Light microscopy Electron microscopy **UNIT II: Cell Structure and Organization** The prokaryotic cell The eukaryotic cell Cell division in prokaryotes and eukaryotes **UNIT III: Microbial Nutrition and Cultivation** Nutritional categories How do nutrients get into the microbial cell? Laboratory cultivation of microorganisms **UNIT IV: Microbial Growth** Estimation of microbial numbers Factors affecting microbial growth The kinetics of microbial growth Growth in multicellular microorganisms **UNIT V: Procaryote Diversity** Domain: Archaea, Domain: Bacteria, Bacteria and human disease **UNIT VI: The Fungi** General biology of the Fungi, Classification of the Fungi, Fungi and disease **UNIT VI: The Protista** 'The Algae', 'The Protozoa', The slime moulds and water moulds (the fungus-like protists) ,Protistan taxonomy: a modern view **UNIT VII: Viruses** What are viruses? Viral structure Classification of viruses Viral replication cycles Viroids Prions

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Cultivating viruses Viral diseases in humans

UNIT VIII: The Control of Microorganisms

Sterilisation Disinfection The kinetics of cell death **UNIT IX: Antimicrobial Agents** Antibiotics Resistance to antibiotics Antibiotic susceptibility testing Antifungal and antiviral agents **Workload**: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

COURSE TITLE: MEDICAL MYCOLOGY COURSE CODE: MLS 406 Objective:

This course deals with the classification of medically important fungi, their lifecycles, characteristic fe at ures, mode of life, clinical manifestations, laboratory examination and the different methods of preventing and controlling fungi.

GENERAL CHARACTERISTICS OF FUNGI

Definition and Taxonomy Morphology Metabolism Reproduction in Fungi

GENERAL ASPECTS OF FUNGAL DISEASE

Fungal Allergies and Fungal Toxicoses

MycogenicAllergies Mycotoxicoses Mycoses Host-Pathogen Interactions Diagnosis Therapy **Primary Mycoses** Histoplasmacapsulatum(Histoplasmosis) Coccidioidesimmitis (Coccidioidomycosis) Blastomycesdermatitidis (NorthAmericanBlastomycosis) Paracoccidioidesbrasiliensis (SouthAmerican Blastomycosis) **Opportunistic Mycoses** Candida (Soor) Aspergillus (Aspergillosis) Cryptococcus neoformans (Cryptococcosis) Mucor, Absidia, Rhizopus(Mucormycoses) Phaeohyphomycetes, Hyalohyphomycetes, Opportunistic Yeasts, Penicilliummarneffei Pneumocystis carinii (Pneumocystosis) Subcutaneous Mycoses **Cutaneous**Mycoses Dermatophytes (Dermatomycoses or Dermatophytoses) Other Cutaneous Mycoses Workload: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

BIO 401: Bioethics

Objectives: This course aimed at presenting the basic concepts, principles, and elements of ethics as well as formulating the ethical principles relevant to medical practice, the doctorpatient relationship, and related areas of concern. The course begins with a brief overview of ethics, and them moves to develop and consider the moral values and principles relevant to medical practice and bioethics. The course aims to consider the defense of general views on the moral values involved in bioethics, as well as the complicated issues of applying this general knowledge to particular situations. The course hopes to develop moral wisdom (knowledge about ethics and the ability to think ethically) and moral virtue (a stronger commitment to act morally).

Content: Topics to be covered include: the nature of the Doctor-Patient Relationship, principles of Patient Decision-Making, Life-Sustaining Treatments (including CPR, and medical nutrition and hydration), Reproductive Issues (including contraception, artificial reproductive technologies, abortion), arguments for Euthanasia and Physician-Assisted Suicide, and Research Ethics (including a consideration of the Stem Cell controversy), etc.

COURSE TITLE: HISTOLOGY AND CYTOLOGY COURSE CODE: MLS 410 CREDIT VALUE: 6

Objective:

This course is designed to give an understanding of the nature of cells of the body, tissues and their functions, processing and examination of tissues and cells in histopathology.

It covers the following aspects: cells tructure and function, overview of microscopy, tissues and tissue examinations, tissue processing and staining, and introduction to cytology techniques

1. The Cell

Protoplasm

Cytoplasmic Organelles

Cytoskeleton

Cytoplasmic Inclusions

Nucleus

1. Role of Diagnostic Cytology

- 2. Collection and Preparation of Material for Cytodiagnosis
- 3. Cytopreparatory techniques of Serous Effusions
- 4. Fixation of Cytology specimens
- 5. Staining methods in Cytology

Epithelium

Sheet/Barrier Epithelium Classification of Epithelia **Cell Attachments** Junctional Complexes Specializations of Epithelial Membranes Glandular Epithelium Histogenesis **General Connective Tissue** Organization and Classification Subtypes of Loose Connective Tissue **Dense Connective Tissue** Special Connective Tissue histogensis Special Connective Tissue: Cartilage, Bone, and Joints Cartilage Bone Joints Histogenesis Repair of Cartilage and Bone **Special Connective Tissue: Blood** Components of Blood Erythrocytes Platelets Leukocytes Blood in Children **Special Connective Tissue: Hemopoietic Tissue** Embryonic and Fetal Hemopoiesis Bone Marrow **Development of Erythrocytes**

Development of Granular Leukocytes 84 **Development of Platelets** Development of Monocytes Marrow Lymphocytes Interrelationships of Hemopoietic Cells **Muscle** Classification **Skeletal Muscle** Cardiac Muscle Smooth Muscle Histogenesis **Nervous Tissue** Neurons Neuroglia Spinal Cord Cerebellar and Cerebral Hemispheres Meninges Autonomic Nervous System Histogenesis HISTOLOGICAL DIAGNOSIS Specimen Types Specimen Examination and Sampling Preparation of Histological Slides 2.4.1 Fixation of Tissue 2.4.2 Processing of Tissue 2.4.3 Sectioning of Tissue 2.5 Staining of Tissue

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: CLINICAL PRECEPTORSHIP IN HISTOLOGY AND CYTOLOGY COURSE CODE: MLS 520

Objective:

This course is designed to give an understanding of the nature of cells of the body, tissues and their functions, processing and examination of tissues and cells in histopathology practically.

Content: The student will spend 40 hours per week for 4 weeks in the Histology and Cytology Department of affiliate laboratory. The time will include both observation and performance of tests under the supervision of a medical technologist. The department traditionally offers practice that will demonstrate the techniques required to prepare, and process a specimen adequate for histologic/cytologic diagnosis. In this context, emphasis will be placed on safe professional practice and the delivery of care. **Prerequisite: MLS 410**

COURSE TITLE: MEDICAL ENTOMOLOGY COURSE CODE: MLS 501 CREDIT VALUE: 6

Objective: This course will provide the fundamental information necessary for understanding the role of arthropod vectors in the transmission of different pathogens to humans. The course further enhances the knowledge of their breeding biology and control measures.

Content

Introduction

- Introduction to Medical Entomology.
- General classification of Arthropods.
- The main taxonomic frame of classification.
- Morphological characteristics of arthropods.

Food selection by insects and host location

Food selection Location of host Extrinsic determinants of host preference Intrinsic determinants of host preference

Blood feeding in haematophagus insects

The importance of blood-sucking insects Feeding preferences of blood-sucking insects Blood intake Digestion of a blood meal Enzymes of blood sucking insects Vectors of diseases: their biology and control measures Mosquitoes. Sand flies. Tsetse flies. House flies and Blow flies. Black Flies. **Horse Flies.** Lice. I Fleas. Bugs. Cockroaches. Ticks. Mites. Workload: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

COURSE TITLE: INTRODUCTION TO BUSINESS & ENTREPRENEURSHIP COURSE CODE: ENT 400 CREDIT VALUE = 4 (20HRS) Aim and objectives The most common serious mistake made in business is not picking the right business to begin with. This session will provide the student with important evaluation techniques to decide which is right for him/her and what it takes to start, run and grow a business.

INDICATIVE CONTENT MODULE I INTRODUCTION DEFINITION OF TERMS Business Entrepreneur Entrepreneurship Etc THE PROS AND CONS OF BUSINESS **THE PRONS (BENEFITS)** Control I Money Creativity and independence **THE CONS (DIMERITS)** Uncertintity **Risk Lack of ETRUCTURE** BUSINESS AND SELF EMPLOYMENT **Entrepreneurial Culture** I Identification and generation of business ideas and opportunities **Business Organization and Management** WHY MANY EMPLOYEES THE DIFFERENT NATURE OF AN ENTREPRENEUR FAILURE RATES OOF SMALL BUSINESSES CHARACTERISTICS OF A SUCCESSFUL ENTREPRENEUR. **Guts Brains** Capital THE 10 Ds OF AN ENTREPRENEUR. Dream Decisiveness Doers Determination Dedication Devotion Details Destiny **Dollars** Distribute. Workload: 4 hours per week (40 hours per semester) Evaluation: Test and end of semester examination.

COURSE TITLE: Clinical Preceptorship in Clinical Biochemistry COURSE CODE: MLS 533

The student will spend 40 hours per week for four weeks in the Clinical Chemistry Department of an affiliate laboratory. The time will include both observation and

performance of tests under the supervision of a medical technologist. This department traditionally offers practice in the use of highly automated chemistry analyzers, instrument maintenance, troubleshooting and statistics of lab operations. **Prerequisite: MLS 415**

COURSE TITLE: RESEARCH PROPOSAL AND SEMINAR PRESENTATION COURSE CODE: MLS 581

CREDIT: 6

Objective: The aim of this course is to enable the student to identify an area of medical laboratory science requiring research and propose a solution(s) through seminar write up.

Outcome: By the end of this course, the student will be able to:

I Formulate a research proposal for a chosen area of interest

I Apply the principles of medical laboratory science based on theories and practical experiences gathered during his/her studies into research so as to develop a systematic approach to research.

Students are expected to gain some public speaking skills through this course.

Indicative Content

Developing a research proposal

Developing a seminar paper

Delivering a seminar

COURSE TITLE: MEDICAL LABORATORY SCIENCE RESEARCH PROJECT CORSE CODE: MLS 498 CREDIT: 12

CREDIT: 12

Objectives: This course is designed to offer the students the opportunity to gain experience in the research process by planning and conducting a technical project and to develop the ability to use critical

thinking in analyzing data and in formulating conclusions based on empirical evidence. **Contents:**

Directed research in the discipline of medical laboratory science (Parasitology, Heamatology, Virology, Bacteriology, Mycology, Clinical biochemistry etc.). The supervisor and the research topic will be chosen by the student. It requires writing a proposal, conducting adequately descriptive or analytical research, writing and presenting a short seminar based on the research findings.

I The research should composed of an Introduction, statement of problem, hypothesis, research questions, rationale, research questions, objectives, literature review, methodology, Results and discussion, conclusion and recommendations.

BIO 420: Fundamentals to Research Methods & Statistical Analysis

Objective: This course is designed to provide foundation knowledge of research methods commonly used. The course will prepare the student to understand material and issues associated with but not limited to the logic of the scientific method, research designs, as well as the use of statistical packages for descriptive and inferential statistics.

Content: This course will cover research processes employing quantitative and qualitative methods. Topics include ethical considerations, observational and survey research techniques, graphing, central tendency and variability, correlation and linear regression, hypothesis testing etc. Students participate in data collection, data analysis and interpretation by means

of the microcomputer Statistical Package for the Social Sciences (SPSS) and in the writing of APA-style research reports.

BACHELOR OF SCIENCE IN PHARMACY TECHNOLOGY (B.PharmTech)

The primary aim of the Bachelor of Science in Pharmacy Technology is to provide the relevant knowledge and skills that are required for entry into the profession. The program prepares graduates for a variety of careers in pharmacy practice, research and teaching. Our graduates influence the continuously changing health care field be it in the community practice, hospital service, healthcare business, pharmaceutical industry or research. In addition, interprofessional education is integrated into the curriculum as an essential component to prepare graduates for interprofessional collaborative patient-centered practice as healthcare professionals.

Program Objectives

- Provide evidence-based patient centered care to optimize pharmacotherapy outcomes in various multidisciplinary healthcare practice settings.
- Manage pharmacy operations in hospitals, community pharmacies, and industrial settings.
- Promote public health awareness and disease prevention, through innovation in the practice of pharmacy, for the benefit of the individual and community being served.
- Perform duties in accordance with legal, ethical, socioeconomic and professional standards.
- Integrate scholarly research with clinical pharmacy practice and commit to selfdirected lifelong learning.

Career Prospects

A wide range of career opportunity is available for graduates with a Bachelor of Science in Pharmacy Technology degree among which include:

- The majority of graduates enter community & Hospital pharmacies practice.
- pharmaceutical sales.
- drug researcher.
- clinical specialty practices in such areas as infectious diseases, pediatrics, psychiatry, intensive care, or cardiology.
- Policy maker or advisor in federal or provincial government, regarding drug products and pharmacy practice.
- Lawyer, journalist or consultant specializing in pharmaceutical issues.

Program Structure

TobeawardedaBachelor of Science Degree in Pharmacy Technology (BS PharmTech), a student must complete the prescribe courses and earn at least 160 credits, with 120 coming from the concentration courses.

Core courses (30 credits)

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- BIO 201: Anatomy and Physiology I
 BIO 202: Anatomy and Physiology II
 CHM 201: General Chemistry
 MLS 202: Clinical Specimen Collection, Processing and Handling
 NUS 206: Medical Sociology and Anthropology
 BCH 310: General Biochemistry
 BIO 401: Bioethics
 MCB 401: General Microbiology and Infectious Diseases
 PHA 310: Physical Assessment and Clinical Skills
- PHA 420: Clinical Pharmacology & Pharmacotherapeutics

Concentration courses (48 credits)

- PHA 201: Introduction to Pharmacy
- PHA 202: Pharmacy Practice
- PHA 315: Pharmacy Calculations
- PHA 325: Pharmacology I
- PHA 330: Medication Dosage and Safety
- PHA 335: Hospital Pharmacy
- PHA 340: Community Pharmacy
- PHA 345: Pharmacy Law & Ethics
- PHA 410: Pharmacology II
- PHA 415: Medicinal Chemistry/Natural Products
- PHA 422: Pharmacy Management
- PHA 425: Biopharmaceutics and Principles of Clinical Pharmacokinetics

Preceptorships (32 credits)

- PHA 214: Introductory Pharmacy Practice
- PHA 3I2: Hospital Pharmacy Practice
- PHA 413: Community Pharmacy Practice

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PHA 423: Institutional Pharmacy Practice

PHA 433: Advanced Pharmacy Practice

Research Courses (36 Credits)

BIO 402: Research Methods and Statistical Analysis

PHA 480: Research Design & Seminar Presentations

PHA 498: Pharmacy Technology Research Project

Course	Course title	Credit	L	T(guided	Р	Tota
code		value	(contact)	study)	(practice	1
)	
SPT 100	Sports & Physical	2	5	0	15	20
	Education					
SET 211	Introduction to Science &	3	20	10	0	30
	technology					
FRE 101	Functional French I	3	30	10	0	40
ENG 101	Use of English I	3	30	10	0	40
BIO 201	Anatomy and Physiology I	6	40	20	0	60
PHA 201	Introduction to Pharmacy	6	40	20	0	60
CHM	General Chemistry	6	40	20	0	60
201						
Total		26	200	90	15	305

SEMESTER ONE YEAR ONE

SEMESTER TWO YEAR ONE

Course	Course title	Credit	L	T(guide	Р	Total
code		value	(contact)	d study)	(practice)	
MAT	College Algebra	3	20	10	0	30
210						
PHA 202	Pharmacy practice	6	20	10	0	30
BIO 202	Anatomy and Physiology II	6	40	20	0	60
NUS 206	Medical Sociology &	6	40	10	0	60
	Anthropology					
MLS 210	Clinical Specimen Collection,	6	40	10	10	60
	Processing and Handling					
PHA 214	Introductory Pharmacy	6	0	0	120	120
	Practice					
Total		33	160	60	130	350

First semester year two

Course	Course title	Credit	L (contact)	T (guided	Р	Total
code		value		study)	(Practic	
					e)	
PHA 345	Pharmacy Law & Ethics	6	40	20	0	30
PHA 325	Pharmacology I	6	40	20	0	60
NUS 335	Medical Sociology and Anthropology	6	40	20	0	60
PHA	Pharmacy Calculations	6	40	20	0	60
315:						
PHA 335	Hospital Pharmacy	6	0	0	120	120
Total		30	160	80	120	360

SECOND SEMESTER YEAR TWO

Course	Course title	Credit	L	T(guide	Р	Total
code		value	(contact)	d study)	(practice	
ICT	Computer Information System	2	20	0	0	20
211						
BCH	General Biochemistry	6	40	20	0	60
310						
PHA	Physical Assessment and Clinical	6	40	20	0	60
310	Skills					
PHA	Medication Dosage and Safety	6	40	20	0	120
330						
PHA	Community Pharmacy	6	40	20	0	120
340						
PHA	Hospital Pharmacy Practice	6	0	0	120	120
3I2						
Total		32	180	80	120	380

FIRST SEMESTER YEAR THREE

Course	Course title	Credit	L	Т	Р	Total
code		value	(contac	(guided	(practice	
			t)	study))	
MCB	General Microbiology and	6	40	10	10	60
401	Infectious Disease					
BIO 401	Bioethics	6	40	20	0	60
PHA 415	Medicinal Chemistry/Natural	6	40	10	10	60
	Products					
PHA 425	Biopharmaceutics and Principles	6	40	20	0	60
	of Clinical Pharmacokinetics					
MLS 415	Clinical Biochemistry	6	40	10	10	60
	-					
Total		30	200	70	30	300

SEMESTER TWO YEAR THREE

Course	Course title	Credi	L	Т	Р	Tota
code		t	(contac	(guided	(practice	1
		value	t)	study))	
ENT 400	Business & Entrepreneurship	4	30	10	0	40
BIO 420	Fundamentals of Research	6	40	20	0	60
	Methods & Statistical Analysis					
PHA 410	Pharmacology II	6	40	20	0	60
PHA 420	Clinical Pharmacology	6	40	20	0	60
	&Pharmacotherapeutics					
PHA 422	Pharmacy Management	6	40	20	0	60
Total		28	190	90	0	280

FIRST SEMESTER FOURTH YEAR

Course	Course title	Credit	L	T	P	Total
code		value	(contact)	(guided study)	(practice	
PHA 413	Community Pharmacy Practice	6	0	0	120	120
PHA 423	Institutional Pharmacy Practice	6	0	0	120	120
PHA 433	Advanced Pharmacy Practice	6	0	0	120	120
Total		18	0	0	360	360

SECOND SEMESTER FOURTH YEAR

Course	Course title	Credit	L	Т	P (practice)	total
code		value	(contact)	(guided		
				study)		
PHA 580	Research Design & Seminar	12	0	0	120	120
	Presentations					
PHA 598	Pharmacy Technology Research	24	0	0	120	120
	Project					
Total		36	0	0	240	240

COURSE DESCRIPTION

COURSE TITLE: ANATOMY & PHYSIOLOGY I CODE: BIO 201 CREDIT VALUE: 6

Objectives: At the end of the course, students should be able to differentiate and know the relationship between cells, tissues, organs and systems. Also be able to identify and describe discuss all the systems of the human body.

Content: Structures, types, characteristics, functions, Membranes, mucous, sources and synovial

fluids, glands, body cavities and their contents; systems i.e. circulatory hepatic, lymphatic, respiratory, digestive, urinary, reproductive, musculo-skeletal nervous system: special senses: the skin.

Details of the course

A. The Chemical Level of organization

-Cell, cell organelles and functions (organization of a typical cell)

-Movements through cell membranes: osmosis, filtration, diffusion, active transport, phagocytosis, and pinocytosis, cell life, and cell death.

-Nucleic acids and protein synthesis

-Introduction to genetics

B. Structure of Body Cells

-Life cycle of a cell: mitosis, meiosis

-Cell differentiation, control of cell reproduction, cancer, hyperplasia, anaplasia and metastasis

C. Structure of Body Tissues

-Types of tissues, their origins and functions.

-Biopsy, pathology and Martan syndrome

-Membranes and glands

D. Overview of Structure of Body Systems (blood, epithelial, muscular, cardiac etc).

-Life processes: responsiveness, growth, differentiation, nutrition, movement and reproduction

E. Some systems of the body

-Circulatory system

-Digestive system

-Endocrine system

- -Immune system
- -Integumentary system
- -Musculo-skeletal system
- -Respiratory system

-urinary system

F. Principles of Homeostasis

-Fluid, electrolyte, and acid base homeostasis

-Fluid compartment and fluid balance

-Intracellular and extracellular fluids

-Electrolytes in body fluids: sodium, chloride, potassium, magnesium, bicarbonate, calcium, phosphate

-Acid-base balance, buffer systems, exhalation of carbondioxide, kidney excretion of hydrogen ions, acidosis, alkalosis, regulation of fluid loss, enemas and fluid balance, body water

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

COURSE TITLE: ANATOMY AND PHYSIOLOGY II COURSE CODE: BIO 202

$\mathbf{CREDITS} = \mathbf{6}$

Objectives: This course is a continuation of BIO 201 and At the end of the course, students should be able to differentiate and know the relationship among the respiratory, digestive, excretory, nervous and reproductive systems. Also students should be able to identify and describe all these systems of the human body.

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Content

Respiratory system

Structure and functions of respiratory organs

Physiology of respiration

Characteristics of normal respiration and its deviations

Digestive system

Structure and functions of organs of digestion and accessory organs

Process of digestion and absorption.

Metabolism: meaning and metabolism of food constituents

Excretory system

Structure and functions of organs of urinary system

Structure and functions of skin

Regulation of body temperature

Fluid and electrolyte balance

Nervous system

Type, structure and functions of neuron. Central nervous system: structure and functions Autonomic nervous system: structure and functions.

Sense organs

Structure and functions of eye, ear, nose and tongue.

Physiology of vision, hearing and equilibrium.

Reproductive system

Structure and functions of reproductive and accessory organs.

Process of reproduction, menstrual cycle and menopause

Reproductive health

Structure and functions of male reproductive system

Note: Wherever possible related clinical application should be included in each unit

Workload: 6 hours per week (60 hours per semester)

Evaluation: Test and end of semester examination.

PHA 201: Introduction to Pharmacy

Objective: This course introduces pharmacy practice and the technician's role in a variety of pharmacy settings. **Content**: Topics include medical terminology and abbreviations, drug delivery systems, law and ethics, prescription and medication orders, and the health care system. Upon completion, students should be able to explain the role of pharmacy technicians, read and interpret drug orders, describe quality assurance, and utilize pharmacy references.

Chapter 1 What is Pharmacy

Pharmacy What Is a Profession? A Brief History of Pharmacy What Is the Purpose of Pharmacy? What Controls Pharmacy? What Shapes Pharmacy? Value of Pharmacy Chapter 2 **The Pharmacist**

Who Are Pharmacists? What Pharmacists Know Characteristics of Pharmacists What Pharmacists Do Titles and Career Paths Supply and Demand for Pharmacists The Rewards of Being a Pharmacist Lifelong Learning and Career Planning Chapter 3 How Drugs are Discovered, Tested, and Approved A Brief History of Drug Discovery and Development How New Drugs Are Discovered Drug Discovery New Methods of Drug Design The Drug Researcher Drug Testing Who Oversees Research on Investigational Drugs? **Drug Standards** How Drugs Are Approved for Use **Chapter 4 The Drug-Use Process** What Is the Drug-Use Process? **Drug Distribution** Self-Care and the Role of Over-the-Counter Medication Prescribing Drugs Dispensing Drug Distribution in Organized Health Care Settings Medication Use **Ouality Drug Therapy** How Drug Therapy Is Monitored and Reviewed Patient Outcomes **Medication Safety** Control of the Drug-Use Process Current Issues in the Drug-Use Process **Pharmacy Organizations** A Brief History The Role of Pharmacy Organizations The Importance of Membership **Pharmacy Organizations**

PHA 215: Pharmacy Practice

Objectives:

This course provides instruction in the technical procedures for preparing and dispensing drugs in the hospital and retails etting sunders upervision of a registered pharmacist.

Content:

Topicsincludedrugpackagingandlabeling,outpatientdispensing,hospitaldispensingprocedures,co ntrolledsubstanceprocedures,inventorycontrol,andnon-

sterile compounding. Upon completion, students should be able to perform basic supervised dispensing techniques in a variety of pharma cysettings.

Part I. Pharmacists in the health care team: a policy perspective

- 1 1 New paradigm for pharmacy practice
- 3 1.1 Introduction
- 3 1.2 Main learning objectives
- 5 1.3 What is health?
- 5 1.4 The pharmacy profession

5 1.5 New dimensions of pharmacy practice

- Pharmaceutical care
- Evidence-based pharmacy
- Meeting patients' needs
- Chronic patient care HIV/AIDS
- Self-medication
- Quality assurance of pharmaceutical care services
- Clinical pharmacy
- Pharmacovigilance
- 6 The value of professional pharmacist services
 - The Pharmacy Practice Activity Classification
- 7 The pharmacist as a member of the health care team
 - Pharmacy practice settings
 - Levels of practice and decision-making
 - The "seven-star" pharmacist

8 Pharmacy practice: a commitment to implement change

- Policy changes
- A change in pharmacy education and a new learning approach

Part II. Pharmacists in patient care: a practice perspective

- 1. Pharmaceutical care
- Introduction
- The pharmaceutical care process
- Pharmaceutical services
- Referral

2Information Management and the Use of Evidence

- Introduction
- Continuing professional development and life-long learning
- Critical appraisal in pharmacy practice -Sources of medicines information

-How to retrieve (and evaluate) medicines information online

-How to obtain relevant information from a pharmaceutical representative

-How to evaluate the medical literature

- Pharmacoeconomic analysis
- Using evidence to develop Standard Treatment Guidelines and an Essential Medicines List.
- Limitations of and misperceptions about evidence-based practice
- The patient's viewpoint

Chapter 8 Community Pharmacy

Types of Community Pharmacies

Patient Service and Satisfaction

Pharmaceutical Care

Dispensing Procedures to Improve Pharmaceutical Care

Avoiding Errors in the Dispensing Process

Community Pharmacy Services

Community Pharmacy Satisfaction

Positions for Pharmacists in Community Pharmacy

Future of Community Pharmacy Practice

Implementing Change in Community Pharmacy Practice

Chapter 9 Hospital Pharmacy

Hospitals

Patients

Health Care Team

Pharmacy Department

Pharmacy Staff

Future of Hospital Pharmacy

PHA 214: Introductory Pharmacy Practice

Objective: This course will provide the student an opportunity to work in pharmacy settings under a pharmacist's supervision during their first year of studies.

Course Content: Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers. (Forty hours per

week for six weeks at assigned affiliate hospital). Prerequisite: BIO 202, BIO202, PHA 201, PHA 202.

PHA 310: Physical Assessment and Clinical Skills

Objectives: Physical assessment and clinical skills provides the student with knowledge and preliminary application of the skills necessary for obtaining a comprehensive patient history and problem identification. Students will learn to design patient-centered, culturally relevant pharmacy care plans and appreciate the role of these plans in patient care. Students will learn and perform basic assessment techniques and the skills necessary for triage and referral. This course will also provide an introduction to the role of home diagnostic and monitoring devices in the diagnosis, staging, and monitoring of various disease states.

Course Content

Chapter One: Introduction, Scheme of history taking and physical examination

- An overview of physical assessment and clinical skills
- Duties and responsibilities of health professionals towards health care
- List the classification clinical history taking
- Components of history of present illness (HPI)

Chapter Two: Vital signs in physical examination

- Components of vital sign
- List normal value of vital signs
- Describe patterns of fever
- Describe the parameters of nutritional assessment

Chapter Three: Physical appearance and Head Ear, Eye, Nose and Throat (HEENT)

- Main symptoms in head, eye, ear, nose and throat problems
- Abnormal findings in eye,ear, nose and throat examination
- Common causes of hearing loss and red eye

Chapter Four: Lymphoglandular system

- Peripheral accessible lymphnodes
- Common causes of generalized lymphadenopathy
- Causes of goiter
- How to examine the thyroid gland and breast

Chapter Five: Respiratory system

- Symptoms of respiratory disease
- Techniques of respiratory system examination

• Interpretion of clinical findings of various respiratory pathologies and diseases Chapter Six: Cardiovascular system

- Main symptoms of cardiovascular disease
- Techniques of precordial examination
- Characters of abnormal arterial pulse
- Characterization of murmur of stenotic or regurgitantvalvular lesions

Chapter Seven: Gastrointestinal system

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- Main symptoms in gastrointestinal disease
- Common causes of chronic diarrhea
- Techniques of abdominal examination
- Examination of palpable abdominal swelling

Chapter Eight: Nervous system

- Main symptoms in nervous system disorders
- Assessment of level and content of consciousness
- Techniques of cranial nerves and motor system examination
- Clinical features of upper motor neuron lesion from lower motor neuron lesion
- Identification of location of lesion in a patient presenting with neurologic deficit

Chapter Nine: Musculoskeletal system

- Symptoms in musculoskeletal problem
- Application of GALS (Gait/Arm/Leg/Spine) screening tests to detect musculoskeletal disorder
- Common causes of joint disorder
- Technique of eliciting stretch test for back pain

Chapter Ten: Genitourinary system

- Main symptoms in urinary tract problem
- Techniques of examining the kidneys
- List and interpret major urinary syndromes
- Causes of oliguria

Chapter eleven: Integumentary system

- how to ask symptoms of skin lesions
- Identification of primary and secondary morphologic skin lesions
- List clinical syndromes of skin lesions

Medical case report

BCH 310: General Biochemistry

This course introduces students to the major organic substances of living organisms, proteins, carbohydrates and lipids: their structure, analysis and biochemical function. Other topics will include: enzymes; the biochemistry of membranes, including the plasma membrane and specialized intracellular membranes; and the biochemistry of selected differentiated cells, a discussion of metabolic pathways, energy production, and metabolic regulatory mechanism.

PHA 315: Pharmacy Calculations

Objectives: This course provides an introduction to the metric, avoirdupois, and apothecary systems of measurement and the mathematical expertise requisite to the compounding, dispensing, and utilization of drugs. **Course content**: Topics include ratio and proportion, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, aliquots, specific gravity and density, and flow rates. Upon completion,

students should be able to perform correctly the calculations required to prepare a medication order properly.

PHA 320: Clinical Pharmacology & Pharmacotherapeutics

This course is designed to prepare students for the pharmacological requirements of practice as a primary care provider. Emphasis is placed on general principles of Pharmacology, drug procurement, storage, distribution, use and control. Autonomic pharmacology and autacoids, antimicrobial agents, Analgesics, an esthetic agents, Respiratory and endocrine pharmacology, euroand psychopharmacology, GIT pharmacology, Drugs acting on blood and bone marrow, Eye, Skin and ENT; Cytotoxic agents and Toxicology. Obstetric Pharmacology. Alternative medicine.

COURSE TITLE: CLINICAL PHARMACOLOGY & PHARMACOTHERAPEUTICS COURSE CODE: PHA 420 CREDIT VALUE = 6 (60 HOURS) OBJECTIVE

This course is designed to prepare students for the pharmacological requirements of practice as a primary care provider. Emphasis is placed on general principles of Pharmacology, drug procurement, storage, distribution, use and control. Autonomic pharmacology and autocoids, antimicrobial agents, Analgesics, an esthetic agents, Respiratory and endocrine pharmacology, euroand psychopharmacology, GIT pharmacology, Drugs acting on blood and bone marrow, Eye, Skin and ENT; Cytotoxic agents and Toxicology. Obstetric Pharmacology. Alternative medicine.

Chapter one: General pharmacology Introduction Pharmacodynamics Pharmacokinetics Theoretical pharmacokinetics Drug safety and effectiveness Development and evaluation of new drugs Chapter two: Drugs acting on autonomic nervous system Learning objectives Introduction Autonomic drugs Cholinergic drugs Anticholinergics Adrenergic drugs Adrenergic blockers Chapter three: Cardiovascular-renal drugs Learning objectives Introduction Antihypertensive drugs Drugs used in heart failure Pharmacotherapy of angina pectoris Anti-arrhythmics Diuretics Drugs used in hypotensive states and shock Exercise Chapter four: Autacoids and their antagonists Introduction Hisamine

5-hydroxytryptamine Prostaglandins **Chapter five: Drugs Action on the Respiratory System** Introduction Pharmacotherapy of bronchial asthma Antitussives **Expectorants & Mucolytics** Decongestants **Chapter six: Drugs used in Gastrointestinal Diseases** Introduction Drugs used in acid-peptic diseases Purgatives Antidiarrhoeals Antiemetics Drugs used to induce vomiting (emetics) Antihaemorrhoidal agents Drugs used in inflammatory bowel disease Chapter seven: Drugs used to treat the diseases of blood, inflammation and gout Introduction Agents used in anemias Drugs used in disorders of blood coagulation Nonsteroidalantiinfammatory agents Drugs used in gout Chapter eight: Drugs acting in the central nervous system Introduction General anesthetics Sedative and hypnotic drugs Drugs used in Parkinsonism Antipsychotic drugs Antidepressant agents **Opioid** analgesics **CNS** stimulants Local anesthetics **Chapter nine: Endocrine Drugs** Introduction Antidiabetic drugs Oxytocics Female sex hormones and hormonal contraception Adrenocortical hormones **Chapter ten: Chemotherapeutic Agents** Introduction, Antibacterial drugs, Antifungal agents, Antiviral agents, Antineoplastic agents, Treatment of protozoan infection, Treatment of helminthic infections **Chapter eleven: Toxicology** Introduction General measures in poisoning Chapter twelve: Prescription writing and rational use of drugs Introduction, Prescription writing, Rational use of drugs Workload: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

PHA 325: Pharmacology I

Objectives: This course introduces the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories.

Course content: Topics include nutritional products, blood modifiers, hormones, diuretics, cardiovascular agents, respiratory drugs, and gastrointestinal agents. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.

PHA 330: Medication Dosage and Safety

Objectives: This course is a study of pharmaceutical dosage forms and considerations in their as well as the safety principles employed in medication- use process.

Course content: Topics include bioavailability, routes of administration, tablets, capsules, solutions, syrups, suspensions, elixirs, aerosols, transdermals, topicals, ophthalmics, otics, and other dosage forms, identifying the types and causes of medication errors; developing strategies for improving the medication-use process; and defining the role of medication safety resources and reporting systems.

PHA 335: Hospital Pharmacy

Objectives: This course provides an in-depth study of hospital pharmacy practice. Emphasis is placed on the role of the pharmacist/pharmacy technician in medication dispensing and patient care in hospital settings.

Course content: Topics include hospital organizational structure, committee functions, utilization of reference works, purchasing and inventory control, drug delivery systems, and intravenous admixture preparation. Upon completion, students should be able to explain hospital organization/committee functions, interpret and enter patient orders, fill unit-dose cassettes, and prepare intravenous admixtures

PHA 3I2: Hospital Pharmacy Practice (Internship)

Objectives: This course will provide the student an opportunity to work in hospital pharmacy under a pharmacist's supervision. Students will gain experience in verification and processing prescriptions, compounding, patient education, patient interaction, drug selection, interpreting telephone and written orders, ordering, inventory control, third, party reimbursement, pricing, pharmacy law, patient counseling, providing non- prescription drug information and all other aspects of hospital pharmacy practice. The overall goals of the internship are to provide the student with a fundamental understanding and appreciation of pharmacy practice. (Forty hours per week for eight weeks at assigned 2 affiliate hospitals). Prerequisite: PHA 213, PHA 315, PHA 325, PHA 330, PHA 335

PHA 340: Community Pharmacy

This course covers the operational procedures relating to retail pharmacy. Emphasis is placed on the role of the pharmacist/pharmacy technician in medication dispensing and patient care as well as general knowledge of over-the-counter products, prescription processing, business/inventory management, and specialty patient services. Upon completion, students should be able to provide technical assistance and support to the retail pharmacist.

PHA 345: Pharmacy Law & Ethics

Objectives: This course will provide students with information and skills in the areas of communication and pharmacy law. Students will be provided resources aimed at improving and utilizing communication skills in diverse pharmacy practice settings.

Course content: The course will also cover the study of law, regulations and court decisions on federal, state, and local levels and the ethical considerations which control and influence pharmacy practice. Professional ethics will be covered in this course

BIO 401: Bioethics

Objectives: This course aimed at presenting the basic concepts, principles, and elements of ethics as well as formulating the ethical principles relevant to medical practice, the doctorpatient relationship, and related areas of concern. The course begins with a brief overview of ethics, and them moves to develop and consider the moral values and principles relevant to medical practice and bioethics. The course aims to consider the defense of general views on the moral values involved in bioethics, as well as the complicated issues of applying this general knowledge to particular situations. The course hopes to develop moral wisdom (knowledge about ethics and the ability to think ethically) and moral virtue (a stronger commitment to act morally).

Content: Topics to be covered include: the nature of the Doctor-Patient Relationship, principles of Patient Decision-Making, Life-Sustaining Treatments (including CPR, and medical nutrition and hydration), Reproductive Issues (including contraception, artificial reproductive technologies, abortion), arguments for Euthanasia and Physician-Assisted Suicide, and Research Ethics (including a consideration of the Stem Cell controversy), etc.

COURSE TITLE: GENERAL MICROBIOLOGY AND INFECTIOUS DISEASES COURSE CODE: MCB 401

CREDIT VALUE = 6

Objective: The overall goal of this course is to introduce students to the field of microbiology and emerging infectious diseases.

Content: It will cover a wide range of topics including bacteriology, virology, microbial pathogenicity and epidemiology, body Defense Mechanisms against infection, the pathophysiology and epidemiology of infectious diseases, host-pathogen relationships and the mechanisms behind the emergence of new microbial threats.as well as the pharmacology of antimicrobial and antiviral agents, The intent is to provide an understanding of the medically relevant bacterial, fungal and viral pathogens and the diseases they produce. The emphasis will be on the pathophysiology of these diseases, the nature of host-parasite interactions and the different clinical syndromes caused by these pathogens. It is not the purpose of this course to teach the clinical management and therapy of infectious diseases

UNIT 1: Introduction Microbiology: What, Why and How? What is microbiology? Why is microbiology important? How do we know? Microbiology in perspective: to the 'golden age' and beyond Light microscopy Electron microscopy **UNIT II: Cell Structure and Organization** The prokaryotic cell The eukaryotic cell Cell division in prokaryotes and eukaryotes **UNIT III: Microbial Nutrition and Cultivation** Nutritional categories How do nutrients get into the microbial cell? Laboratory cultivation of microorganisms **UNIT IV: Microbial Growth** Estimation of microbial numbers Factors affecting microbial growth The kinetics of microbial growth Growth in multicellular microorganisms **UNIT V: Procaryote Diversity** Domain: Archaea, Domain: Bacteria, Bacteria and human disease **UNIT VI: The Fungi** General biology of the Fungi, Classification of the Fungi, Fungi and disease **UNIT VI: The Protista** 'The Algae', 'The Protozoa', The slime moulds and water moulds (the fungus-like protists) Protistan taxonomy: a modern view **UNIT VII: Viruses** What are viruses? Viral structure Classification of viruses Viral replication cycles Viroids **Prions** Cultivating viruses Viral diseases in humans

UNIT VIII: The Control of Microorganisms

Sterilisation Disinfection The kinetics of cell death **UNIT IX: Antimicrobial Agents** Antibiotics Resistance to antibiotics Antibiotic susceptibility testing Antifungal and antiviral agents **Workload**: 6 hours per week (60 hours per semester) **Evaluation:** Test and end of semester examination.

PHA 410: Pharmacology II

Objectives: This course provides a continuation of the study of properties, effects, and therapeutic value of the primary agents in the major drug categories.

Course content: Topics include autonomic and central nervous system agents, antiinflammatory agents, and anti-infective drugs. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.

PHA 413: Community Pharmacy Practice

This course is will provide structured practical experience in community pharmacy practice. Students will have the opportunity to provide clinical pharmacy services utilizing pharmacotherapy, evidence based medicine, and physical assessment in a community/retail setting. Through utilization of competency-based objectives, students gain a greater appreciation for the profession of pharmacy and develop professional attitudes, judgment and technical skills needed to function in the community setting. Students observe/discuss the role of the community pharmacist and actively participate in daily operations that focus on the distributive aspects of practice. (Forty hours per week for four weeks at assigned affiliate community pharmacy). Prerequisite: PHA 213, PHA312, PHA 340

PHA 415: Medicinal Chemistry/Natural Products

Objectives: The course is designed to include basic chemical concepts that govern drug action, general principles of medicinal chemistry, and chemical characteristics of selected drug classes. Students will also gain an understanding of how these principles can be generally applied to making drug therapy decisions.

Course content: Medicinal chemistry/natural products addresses the physicochemical properties of drug molecules, the chemical basis of pharmacology and therapeutics, fundamental pharmacophores for drugs used to treat disease, structure-activity relationships pertaining to drug-target interactions, and chemical pathways of drug metabolism. The main objective of the course is to understand how the chemical structures of drugs determine their biological properties, including absorption, distribution sites of action, interactions with pharmacological targets, metabolic inactivation, forms and routes of elimination, and therapeutic potential.

PHA 420: Pharmacy Management

Objectives: The course is designed to teach students the requisite skills needed to perform managerial functions in various pharmacy practice settings.

Course content: It provides an introduction to marketing principles, basic accounting principles, project management issues, managing and improving the medication-use process,

and topics related to healthcare improvement mechanisms at the micro- and macro-system levels.

PHA 423: Institutional Pharmacy Practice (Internship)

Objectives: This course is will provide structured practical experience in Institutional pharmacy practice. Students will have the opportunity to provide clinical pharmacy services utilizing pharmacotherapy, evidence based medicine, and physical assessment in a community/retail setting. Through utilization of competency-based objectives, students gain a greater appreciation for the profession of pharmacy and develop professional attitudes, judgment and technical skills needed to function in the institutional settings. Students observe/discuss the role of the pharmacist and actively participate in daily operations that focus on the distributive aspects of practice. (Forty hours per week for four weeks at assigned affiliate community pharmacy). Prerequisite: PHA 213, PHA 312, PHA 340

PHA 425: Biopharmaceutics and Principles of Clinical Pharmacokinetics

Objectives: Thiscourseisdesignedtoincludekeymathematical,physicochemical,and biologicalprinciples that governthefateofa dosage form oritsactiveingredient as ittraversesthemanyvariedbarriersbetweenthesiteofadministration,thesiteofaction,andthesiteand modeofelimination.

Content:

The fate of a medication in the body is determined by several keyfactors that include the dosage form or delivery system, theroute of administration or site of delivery, the chemical structure of the active ingredient, and the functional status of the patient's biological systems. Dissecting and modeling the interplay among these factors is the purview of bio pharmaceutics and pharmacokinetics. The knowledge and al gorithms derived from such exercises are routinely applied to facilitate dosage form design, to predict medication dosing regimens, and to optimize treatment protocols for individual patients based on their specific profiles. Learning activities in the course consist primarily of lectures, discussions, and proble m-solving exercises or assignments.

PHA 425: Biopharmaceutics and Principles of Clinical Pharmacokinetics

Chapter 1.- INTRODUCTION.

- Concepts and relevance of biopharmaceutics and pharmacokinetics. Sources of information.
- The passage of drugs through the body.
- Overview and basic concepts of drug release, absorption, distribution, metabolism and excretion.

Chapter 2.- PHARMACOKINETICS.

- Data for the study of LADME.
- Drug plasma level curves and urinary excretion curves.
- Kinetics of the LADME steps: Zero order, first order and Michaelis-Menten kinetics.
- Usual kinetics in LADME.

II. KINETIC STUDIES OF DRUG CHANGES WITHIN THE BODY

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Chapter 3.- PHARMACOKINETIC MODELS.

- Compartmental pharmacokinetics: Concepts of compartment, simple models, linear and nonlinear pharmacokinetics.
- Non-compartmental pharmacokinetics.
- Physiological modelling.
- Population pharmacokinetics.
- In silico prediction of pharmacokinetics.

Chapter 4.- ONE-COMPARTMENT OPEN MODEL.

- Intravenous bolus administration.
- Interpretation of plasma concentration/time profiles.
- Elimination phase: concept and determination of the elimination rate constant.
- Elimination half-life, area under the curve, volume of distribution and plasma clearance.
- Relationships and their influence on drug plasma concentration/time curves.

Chapter 5. Extra-vascular administration with first order absorption.

- Overview and interpretation of plasma concentration/time profiles.
- Lag time and its determination.
- Determination of area under the curve, Cmax and tmax.
- Estimation of the absorption rate constant by using direct and indirect methodologies: method of residuals, cumulative absorption method (Wagner-Nelson), The Dost method.

Chapter 6. Mathematical equation for single extra-vascular dosing in the one-compartment open model.

- The Bateman equation.
- Characteristics of drug plasma concentration/time curves.
- Influence of administration route and dosage form.
- The Flip-flop model.
- Effect of changes in the absorption and disposition parameters.
- Mass balance: drug amounts in the body, eliminated or in the absorption site.

Chapter 7.- TWO-COMPARTMENT OPEN MODEL.

- Bolus intravenous dosing: why this model?
- Central and peripheral compartments.
- Overview and interpretation of drug plasma concentration/time curves
- Model equations. Determination of hybrid (macro-constants) and individual disposition rate constants (microconstants), area under the curve and volumes of distribution. Relationships between disposition and elimination rate constants. Mass balance: drug amounts in the body and eliminated.

Chapter 8. Extra-vascular administration with first order absorption.

- Pharmacokinetic model and equations.
- Characteristics of the drug plasma concentration/time curves.
- Calculation of Cmax, tmax and area under the curve.
- Estimation of the absorption rate constant by different methodologies: Residuals or retroprojection method.

- The Loo-Riegelman method.
- Lag phase.

• Mass balance: drug amounts in the body, eliminated or in the absorption site. Chapter 9.- ZERO ORDER INCORPORATION KINETICS.

- Determining factors. Intravenous infusion.
- Drug plasma concentration/time curves in one- and two-compartment open models.
- Plateau or steady-state concentration.
- Incorporation and disposition phases.
- Calculation of pharmacokinetic rate constants. Immediate steady-state concentration. Chapter 10.- URINARY EXCRETION CURVES.
 - Drug plasma concentrations and excretion rates in urine.
 - Distributive and cumulative curves.
 - Determination of pharmacokinetic rate constants in the one- and two-compartment open models.
 - Pros and cons of urinary excretion curves.

Chapter 11- CLEARANCE.

- Concept. Extraction rate.
- Hepatic clearance. Renal clearance.
- Factors influencing drug clearance.
- Determination of drug clearance.

Chapter 15.- DRUG RELEASE.

- Mechanisms and effect on bioavailability.
- Immediate release drug dosage forms: Disintegration and dissolution as limiting factors for drug absorption.
- Factors influencing drug dissolution.
- Mechanisms and drug release kinetics in modified release dosage forms.
- Relevance of diffusion on the global process.

Chapter 16.- DRUG ABSORPTION.

- Administration routes and absorption sites.
- Drug access to the blood stream.
- Pre-systemic metabolism and first pass effect.
- Recycling processes.
- Kinetic study of absorption mechanisms.
- Drug transporters.
- The BCS and other classification systems.

Chapter 17.- DRUG ADMINISTRATION

- Parenteral administration.
- Oral administration.
- Rectal and vaginal administration.
- Nasal and pulmonary administration.
- Percutaneous administration.

Chapter 24.- DRUG DISTRIBUTION.

- Body fluid compartments and volume of distribution..
- Extent and rate of distribution. Factors affecting drug distribution.
- Drug protein binding: factors and binding parameters (Klotz and Scatchard methods).
- Competitive binding and effects on drug distribution and elimination.

Chapter 25.- DRUG BIOTRANSFORMATION.

- Overview. Hepatic biotransformation and first-pass effect.
- Non-hepatic metabolism.
- Kinetics and factors affecting drug metabolism. In vitro characterization of drug metabolism.

Chapter 26.- DRUG EXCRETION.

- Sites and mechanisms.
- Renal excretion and conditioning factors.
- Excretion by other routes: biliary excretion, Enterohepatic recycling, Salivary excretion, Pulmonary excretionand Milk-breast excretion.
- Secondary excretion routes. Influence of non-renal excretion of drugs on therapy.

IV. BIOAVAILABILITY AND BIOEQUIVALENCE

Chapter 27.- OVERVIEW OF BIOAVAILABILITY AND BIOEQUIVALENCE.

- Definition and factors influencing drug bioavailability.
- Determination of rate and extent of bioavailability from single dose and multiple dose administration.
- Bioequivalence. Concept, definition and regulatory aspects. Methods to determine drug product bioequivalence.

Chapter 28.- Bioavailability and Bioequivalence studies.

- Goals, experimental design and ethical issues.
- Methodology, pharmacokinetic analysis and significant parameters to compare.

V. DRUG DOSING

Chapter 29.- CLINICAL PHARMACOKINETICS.

- Pharmacologic response in pharmacokinetics.
- Drug dosing: administration regimens.
- Therapeutic margin.
- Strategies to establish a dosing regimen.

Chapter 30.- Therapeutic drug monitoring.

- Concept, methodology and pharmacokinetic significance.
- Drug dosing in adults.
- Drug dosing in neonatology and pediatrics.
- Drug dosing in organ dysfunction.

BIO 420: Fundamentals to Research Methods & Statistical Analysis

Objective: This course is designed to provide foundation knowledge of research methods commonly used. The course will prepare the student to understand material and issues associated with but not limited to the logic of the scientific method, research designs, as well as the use of statistical packages for descriptive and inferential statistics.

Content: This course will cover research processes employing quantitative and qualitative methods. Topics include ethical considerations, observational and survey research techniques, graphing, central tendency and variability, correlation and linear regression, hypothesis testing etc. Students participate in data collection, data analysis and interpretation by means of the microcomputer Statistical Package for the Social Sciences (SPSS) and in the writing of APA-style research reports.

PHA 433: Advanced Pharmacy Practice (Internship)

Objective: The advanced pharmacy practice is designed to aid the student in developing and applying skills and information previously presented in formal coursework toward the practice of pharmacy. These experiences are directed toward direct patient care where students will be exposed to acute/primary care and ambulatory care; indirect patient care where students will be exposed to aspects of health system and community management. Emphasis is placed on the student's ability to function as a clinician in a practice setting (hospital, community and ambulatory), along with development of the skills and attitudes related to communication skills, problem-solving skills, and self-assessment skills. (Forty hours per week for eight weeks at assigned affiliate hospital/community pharmacy). Prerequisite: PHA 213, PHA 312, PHA 413, PHA 423

PHA 480: Research Design & Seminar Presentation

The research design project involves an individual student or a small group of students working as a team to put the knowledge acquired in previous courses into concrete praxis to design and present a nominated project. The tasks include the study of the available processes, process selection, calculation of material and energy balances, preparation of flow sheets, preparation of a design report and drawing of the plant layout.

PHA 498: Pharmacy Technology Research Project

A program of study on an approved research topic in pharmacy technology will be followed up by a supervisor. This supervised individual study provides an opportunity for in-depth reading and research on a topic selected by the student and supervisor. Students in this program of study may carry out a pilot project in preparation for a thesis or dissertation. Students are expected to select a researchable problem in theology and carry out a study on it. This project should follow the American Psychological Association (APA) format.

MASTSER OF MEDICAL MICROBIOLOGY AND PARASITOLOGY

Prerequisites

- All students from other universities, irrespective of their program of choice, will have to do SGS 500 Seminar on Graduate Studies as prerequisite course.
- All students from other programs have to take prerequisite courses that introduce students into the new program of choice. These courses are given to students upon registration into the program.

INTRODUCTION

The Master of Science in Medical Microbiology and Parasitology is designed to produce competitive medical professionals in the field of Medical Microbiology and Parasitology

Human infections remain a common cause of morbidity and mortality in Cameroon and the rest of the world. Immunization, the availability of antibiotics and improved standards of living has caused an appreciable reduction in several important and previously common infectious diseases. However, vaccines and effective antimicrobial agents are still not available for many viral, bacterial, fungal and parasitic diseases which continue to affect millions of human beings every year. In addition, the emergence of multi-resistant microbes has reduced the effectiveness of many currently available antimicrobial agents. Newly emerging infections, travel associated infections and the treat of bioterrorism bring fresh threats to human beings throughout the world. Effective control of infective diseases requires a multi-pronged approach, central to which is the availability of a network of efficient and reliable microbiology diagnostic and reference laboratories. The establishment and running of diagnostic and research laboratories requires persons trained in laboratory methodology, including molecular techniques which are being increasingly used for diagnostic and epidemiological purposes. Laboratory personnel also require training in laboratory management and competence in using information technology for accurate record keeping, archiving and analysis of data.

2. AIMS

(i) The postgraduate training programme in medical microbiology and parasitology aims to produce scientists ready to apply modern methods of diagnosis of infective diseases caused by viruses, bacteria, fungi and other parasites.

(ii) These scientists will be able to pursue a career in research or in diagnostic Microbiology and Parasitology

3. LEARNING OBJECTIVES

On completion of the course, the successful candidates shall have achieved the following overall objectives:

- (i) A knowledge of the morphology, genetics, growth characteristics, laboratory identification, habitat, transmission and pathogenicity of viruses, bacteria, fungi and parasites commonly associated with human infections.
- (ii) Acquired practical skills in the laboratory diagnosis of human infections caused by viruses, bacterial, fungi and other parasites
- (iii)An understanding of the applications of molecular biology in the diagnosis of human infections.
- (iv)Understood the safety and public health aspects of virus, bacterial, fungal and other parasitic infections and the principles of prevention and control
- (v) Acquired the knowledge and skills required to establish and manage a diagnostic microbiology laboratory
- (vi)Understood current trends in medical microbiology and be able to critically appraise published work
- (vii) Be able to communicate information clearly, both verbally and in writing
- (viii) Demonstrate an ability to design, undertake and interpret a research project and present it in the form of a dissertation

4. PROGRAMME ELIGIBILITY

Candidate having a Bachelor's Degree in Biological, Medical, Veterinary, Dental or Agricultural sciences from a recognized University or equivalent qualifications acceptable to the PGIS are eligible to enroll in the programme. The final selection will be made according to the selection procedure stipulated by the Postgraduate Institute of Science. Employed candidates who are eligible for admission should produce evidence of leave granted to follow the programme and a letter of release from the Head of the relevant Department/Institution.

5. THE PROGRAMME STRUCTURE AND DURATION

This programme consists of course work and a research project, having a total credit value of 126 (course work, 66 and research project, 60). The programme will be conducted on a course unit basis, as stipulated by the PGIS for all M.Sc. programmes. The course work will be conducted over a period of two semesters of 15 weeks each. The M.Sc. programme will be conducted over a period of 18 months inclusive of the time allocated for the research project. The research project will take 4 - 7 months, which could overlap the course work. Satisfactory completion of a minimum of 66 credits of course work (with a GPA of not less than 3.00) is required for the programme in addition to the sixty credits allocated for the research project. After successfully completing the research project, the student is eligible for the award of the M.Sc. Degree.

An academic advisor will be appointed to each candidate enrolling for the programme. The advisor and the candidate must keep in touch with the programme co-ordinator for the smooth conduct of the programme. English is the medium of conducting lectures and examinations. IT facilities are available for the programme.

Course Structure

MMP609: Medical Microbiology

MPH622: Legal and Ethical Issues for Health Professionals

MMP 619: Advanced Molecular Biology and Biotechnology

MMP631: Advanced Immunology of infectious Diseases

MMP 640: Antimicrobial Chemotherapy

MPH 642: Environmental and Occupational Health

MMP651: Advanced Diagnostic Parasitology

MMP 660: Integrated Vector Management

MPH 660: Advanced Concepts and Methods in Epidemiology & Control of Infectious Diseases

MMP671: Vector Biology & Vector Parasite Interactions

MMP 693: Clinical Diagnostic Microbiology and Parasitology

MMP 698: Thesis in Medical Microbiology and Parasitology

STRUCTURE OF MSc. MEDICAL MICROBIOLOGY AND PARASITOLOGY CURRICULUM IN SEMESTERS

Course		Credit	L	T (guided	Р	Total
Code	Course Title	Value	(contact)	study)	(practice)	
MMP609	Medical Microbiology	6	40	0	20	60
MMP 619	Advanced Molecular Biology and	6	40	0	20	60
	Biotechnology					
MMP631	Advanced immunology of	6	40	5	15	60
	Infectious Diseases					
MMP651	Advanced Diagnostic Parasitology	6	40	0	20	60
MMP671	Vector Biology and Vector	6	40	0	20	60
	Parasite Interac					
MMP691	Clinical Diagnostic Microbiology	6	40	0	20	60
	and Parsitology					
Total		36	240	5	115	360

SEMESTER 1 YEAR ONE

SEMESTER 2 YEAR ONE

Course		Credit	L	Т	P (practice)	Total
Code	Course Title	Value	(contact	(guided		
)	study)		
MPH 622	Legal & Ethical Issues for	6	30	10	20	60
	Health Professionals					
MMP 640	Antimicrobial Chemotherapy	6	40	0	20	60
MPH 642	Environmental &	6	40	20	0	60
	Occupational Health					
MMP 660	Integrated Vector Management	6	40	20	0	60
MPH 660	Advanced Concept & methods	6	40	20		60
	in Epidemiology & control of					
	Infectious Diseases					
Total		30	190	70	400	300

SEMESTER I YEAR TWO

Course Code				Credit	L	T (guided	Р	Total
	Course Title			Value	(contact)	study)	(practice)	
ENT 600	Entrepreneurship			6	40	10	10	60
MMP 680	Seminar	in	Medical	12	20	20	80	120
	Micrbiology and Parasitology							
Total				18	60	30	90	180

SEMESTER 2 YEAR TWO

Course Code		Credit	L	T (guided	Р	Total
	Course Title	Value	(contact)	study)	(practice)	
MMP 698	Thesis in Medical Microbiology & Parasitology	42	120	200	200	420
Total		60	100	300	200	600

Course Description MMP609: Medical Microbiology

Course Description: This course is designed to provide students with an understanding of the clinical and diagnostic issues in bacteriology, virology and mycology. The course begins with introductory lectures reviewing the laboratory methods in use in modern diagnostic laboratories. This will be followed by comprehensive presentation of all the families of human bacterial pathogens (systemic pathogenic bacteria), viruses and fungi affecting humans with emphasis on the taxonomy, structure, epidemiology, virulence factors, clinical presentations of infection, modern diagnostic and detection techniques, treatment and prevention. The role and mechanisms of common antimicrobial, antiviral and antifungal resistance in bacteria, viruses and fungi, respectively will also be covered.

Objectives: On completion of this course, the student is expected to:

- 1. Know the microorganisms and parasites that can cause disease in human beings, including virulence mechanisms and the epidemiology of infections.
- 2. Know the defence mechanisms that help protect the host from infection and help eradicate pathogenic microorganisms and parasites.
- 3. Know control strategies that can be used to treat and prevent infectious diseases.
- 4. Perform a variety of practical procedures safely, accurately and reproducibly, and to understand and explain the theoretical basis of the techniques used.
- 5. Discuss relevant microbiology and infection topics with peers and staff.

MPH622: Legal and Ethical Issues for Health Professionals

Course Description: This course presents an overview of the legal issues facing the healthcare industry with some inferences on Cameroon. It provides students with a basic working knowledge of health law and Professional ethics. It is a comprehensive and inclusive review of a wide variety of health care legal issues. Students are provided with a realistic knowledge of health law and its application to the real world. The examination of contemporary legal and ethical issues encountered by health professionals in the provision and delivery of healthcare products and services. Topics explored include, but are not limited to, patient-caregiver relationships, high-tech medicine, regulatory compliance, healthcare ethics, criminal aspects of healthcare, corporate structure, patient rights, medical records, and disclosure of patient information in healthcare.

Objectives: At the end of this course, students are expected to validate the online institutional review board (IRB) training course on ethical issues in health research at the National Institute of Health (NIH) (<u>https://phrp.nihtraining.com/users/login.php</u>).

Upon successful completion of this course, the student will be able to:

- 1. Integrate a biblical worldview when evaluating legal and ethical issues related to healthcare.
- 2. Defend how the law protects patient rights and regulates patient-provider relationships, confidentiality, information management, medical malpractice, and other key areas related to the delivery of healthcare services.
- 3. Evaluate the role of ethics in business and clinical decision making.
- 4. Assess key legal and ethical issues in the provision of healthcare based upon knowledge of current literature and industry best practices.

MMP 619: Advanced Molecular Biology and Biotechnology

Course Description: The aim of this course is to acquaint the students to versatile tools in molecular biology techniques and demonstrates the influence of recombinant DNA technology in modern Biotechnology. The module will include lectures on the key principles

and techniques in molecular biology that are required for this process, including the concept of molecular cloning, cloning vectors (plasmids, bacteriophage lambda and others) and their hosts, expression vectors and their construction, synthetic DNA (synthesis of primers), amplifying DNA (The polymerase chain Reaction, PCR), COT curves, transfection, reverse transcription and DNA sequencing, hybridization and labeling of nucleic acids. Construction principles and uses of gene/chromosome libraries (human, animal and plant gene libraries) as well as restriction fragment length polymorphism (RFLP) analysis will be covered under this module. Bacterial expression systems are the most commonly used in biotechnology therefore a component of the course will focus on cloning and expression of mammalian genes in bacteria, and will also cover the use of in vitro and site-directed mutagenesis to change the sequences and properties of the recombinant proteins being expressed. The module ends with applications of genetic engineering in biotechnology and demonstrates the influence of Recombinant DNA technology in the production of mammalian products (such as human growth hormones and insulin) and vaccines, gene therapy, transgenic plants and animals, food processing as well as environmental bioremediation.

Objectives: Upon completion of this course, students will be able to:

- 1. identify uses of molecular biology and biotechnology with biomedical, industrial and environmental applications;
- 2. broadly and coherently understand the fundamental principles involved in the production of genetically modified organisms and their practical applications;
- 3. use well developed cognitive skills to communicate the application specific molecular biological techniques and to evaluate the purpose-specific choice of molecular tools; and
- 4. analyse and evaluate molecular biology data obtained from empirical experimentation.

MMP631: Advanced Immunology of infectious Diseases

Course description: The course examines the molecular and cellular basis of the immune system and how they culminate to fight infection. In addition to providing background material, the lectures will also attempt to bring students up to date with current areas of basic research in immunology. Topics to be covered include: lymphocyte development; immunoglobulin and T cell receptor gene rearrangement; immunoreceptor signaling; MHC class I and class II antigen presentation; cytokines, phagocytes; NK cells; autoimmunity; immunodeficiency, mechanisms underlying immunologic disease, Analysis of medical literature reporting immunologic advances, rationale for use of new immunodiagnostic and immunotherapeutic modalities etc, as well as diagnostic techniques in the detection of these immunological properties.

Objectives: By the end of this programme students should be able to:

- demonstrate specialist knowledge and understanding of the basic principles of host immunity to infection against the diverse range of pathogens which confront human populations
- apply this specialist knowledge to a range of practical skills and techniques, in particular modern molecular and cellular techniques for assessing immune responses to pathogens
- critically assess, select and apply appropriate research methods to investigate basic immunological mechanisms and applied issues in the immunology of infection
- critically evaluate primary scientific data and the published scientific literature

• integrate and present key immunological concepts at an advanced level, both verbally and in written form

MMP 640: Antimicrobial Chemotherapy

Course Description: This course is aimed at examining the principles of antimicrobial chemotherapy within the areas of selectivity Selective toxicity, medicinal chemistry, pharmacodynamics and pharmacokinetics (pharmacology) and apply these to different classes of antimicrobials such as antibacterial, antiviral and antiprotozoal compounds. Areas to be covered include: Antimicrobial chemotherapy versus Pharmacodynamics. Principles of selective toxicity - distribution, comparative biochemistry, comparative cytology. Classifications of antibiotics. Principles of treatment - clinical diagnosis; bacteriological diagnosis; place of chemotherapy in medicine; considerations relevant to effective antibiotic use; reasons for treatment failure. Investigations of the mechanism of action, spectrum, absorption, distribution, metabolism and excretion and adverse events of the major classes of antimicrobial agents including: Sulfonamides/Trimethoprim: Penicillins, Cephalasporins and other Beta-lactam drugs; Aminoglycosides; Protein synthesis inhibitors; Anti-tuberculoids; Anti-malarials; Anti-virals; Anti-fungals and miscellaneous antimicrobial agents. Mechanisms for the development of antimicrobial resistance Antimicrobial combination therapy and antibiotic policies.

Objectives: At the end of this course, students are expected to:

- Contrast bacteriostatic versus bactericidal antibacterial activities
- Contrast broad-spectrum drugs versus narrow-spectrum drugs
- Explain the significance of superinfections
- Discuss the significance of dosage and the route of administration of a drug
- Identify factors and variables that can influence the side effects of a drug
- Describe the significance of positive and negative interactions between drugs

MPH 642: Environmental and Occupational Health

Course Description: This course covers terms and concepts in environmental health with particular emphasis on various types of environmental pollution, global warming, Greenhouse effect, Occupational health, and the role environment plays in the transmission of communicable diseases. The main goal of this course is to educate students about the terms and concepts in environmental and occupational Health with particular emphasis on the various types of pollution, global warming, Greenhouse Effect, and the role of the environment in the transmission of communicable diseases.

Objectives: Upon completion of the course, learners will be better prepared to:

- 1. <u>summarize</u> the composition and fate of organic and inorganic chemical matter in the environment.
- 2. <u>summarize</u> the principles and application of environmental (including occupational) health science relative to identifying, evaluating and controlling contaminants and related human and animal exposures (i.e., One Health Approach).
- 3. <u>recognize</u> the basic principles of toxicology as applied to fate of chemical contaminants in humans and animals.
- 4. <u>explain</u> how the principles of environmental and occupational health apply to the outdoor and indoor and non-workplace and workplace settings

- 5. <u>apply</u> the industrial hygiene (occupational health) principles of anticipation/recognition, evaluation and control of chemical air contaminants in workplace settings.
- 6. <u>describe</u> the principles of industrial hygiene integrated air sampling for collection of chemical particulates, gases and vapors;
- 7. <u>calculate</u> applicable values for concentrations and time-weighted averages (TWAs) for comparison to appropriate environmental and exposure standards and guidelines;
- 8. <u>outline</u> industrial hygiene monitoring reports.

MMP651: Advanced Diagnostic Parasitology

Course Description: The main aim is to introduce modern methods in use and under development for the laboratory diagnosis of the important parasitic diseases of man for clinical and epidemiological purposes. The module also provides opportunities to evaluate the potential applications of these methods in developing and developed countries, and to improve diagnosis by microscopic methods.

Objectives: Upon successful completion of the course each student should be able to:

1. Demonstrate detailed knowledge and understanding of the application and evaluation of advanced diagnostic techniques;

2. Compare the organisation and management of laboratories in resource rich and resource poor settings;

3. Demonstrate increased ability to diagnose parasites by microscopy.

MMP 660: Integrated Vector Management

Course Description: Topics to be covered include, Chemical, physical and biological methods of controlling vectors and intermediate hosts with provisional recommendations, based on scientific evidence, about the appropriateness and cost-effectiveness of particular methods for addressing vector control problems in particular settings; formulate accurate responses to key questions about side effects and resistance problems arising from application of vector control.

Objectives: The aim of this course is to provide students with theoretical and practical knowledge of how vectors can be controlled using a combination of interventions. Upon successful completion of the module a student will be able to:

1. Demonstrate knowledge and understanding of chemical, physical and biological methods of controlling vectors and intermediate hosts;

2. Make provisional recommendations, based on scientific evidence, about the appropriateness and cost-effectiveness of particular methods for addressing vector control problems in particular settings;

3. Formulate accurate responses to key questions about side effects and resistance problems arising from application of vector control and their management, as well as current challenges and policy in global vector control.

MPH 660: Advanced Concepts and Methods in Epidemiology & Control of Infectious Diseases

Description: Topics include: general principles of infectious disease epidemiology, including: principles of Infectious diseases; outbreak investigation; role of the public health laboratory; disease surveillance; principles of screening and screening tests; Major infectious

diseases and modes of transmission, including: food borne illness; zoonotic diseases; tuberculosis; influenza; vector borne diseases; malaria; other parasitic diseases; HIV/AIDS; sexually transmitted diseases; viral hepatitis; antibiotic resistant bacteria, different control and evaluation strategies for infectious diseases, including: vaccination; nosocomial infections; behavior change and HIV/AIDS; blood safety; immigrant and refugee health etc. **Objectives:** The purpose of this course is to provide students with more knowledge about the principles and practice of infectious disease epidemiology, including how communicable diseases and their control affects public health locally, nationally and internationally.

MMP671: Vector Biology & Vector Parasite Interactions

Description: This course is aimed at equipping students with a broad understanding of the key aspects of insect vector behavior, vector ecology and vector-parasite interactions relevant to the epidemiology and control of vector-borne diseases. This module will provide students with a broad understanding of the key aspects of insect vector behaviour, vector ecology and vector-parasite interactions relevant to the epidemiology and control of vector-borne diseases. Objectives: By the end of this Study Module students should be able to: Demonstrate knowledge and understanding of key aspects of vector behaviour, vector ecology and vectorparasite interactions. Demonstrate an understanding of how these features impact on the epidemiology and control of vector borne diseases. Apply a range of practical entomological techniques and tools used in research on vector competence and ecology. Demonstrate the ability to critically evaluate the relevant scientific literature. Demonstrate some of the skills required to design a research project related to vector biology or competence. This module is intended primarily for entomologists and parasitologists who wish to develop an active research interest in this discipline in field or laboratory, or apply it within the context of a control programme. Some basic knowledge is assumed (e.g. contents of Parasitology and Entomology in term 1). This module will be divided into three teaching blocks covering research areas in vector behaviour, vector ecology, and vector parasite interactions.

MMP 693: Clinical Diagnostic Microbiology and Parasitology

Course Description: This course provides a clinical experience in modern diagnostic methods in microbiology and parasitology learnt during the taught modules. Students will spend 3 months each in the microbiology and parasitology unit at an affiliate laboratory.

Objectives: Students will:

- 1. identify and adhere to established guidelines for working with potential pathogens to ensure biohazard safety;
- 2. evaluate acceptability of specimens for potential pathogens and indigenous flora;
- 3. list and demonstrate steps of proper procedure for microbiological staining, and interpret results for use with identification of pathogens;
- 4. cultivate, isolate and identify infectious agents; and
- 5. interpret antimicrobial susceptibility testing.

MMP 698: Thesis in Medical Microbiology and Parasitology

Students must write and defend a satisfactory thesis to be awarded a Master's degree. This piece of work, undertaken in the last semester gives you the opportunity to apply the techniques and theories learned during the taught modules. Thesis topics reflect the expertise of your lecturers and you may be asked to choose from a list of options. Supervision often

starts with small groups of students studying similar topics meeting with their supervisors, who then guide students in deciding on the focus for their individual Thesis. The Thesis itself normally consists of a literature review followed by a piece of empirical work, involving either qualitative or quantitative research. It should not be less than 50 pages.