



# **Competency-Based Curriculum Pre-service Training for Registered Midwives**

**Republic of Liberia**

**Revised by:  
The Liberian Board for Nursing &  
Midwifery**

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To all Instructors using the Nursing and Midwifery curricula, we urge you to use it as it was planned to develop well-trained and competent students who will become well-trained, skilled health providers.

Cecelia Morris  
Chair-person,  
Liberian Board of Nursing & Midwifery  
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# Introduction

Nursing education in Liberia dates back to 1921. The Phebe Hospital and School of Nursing graduated its first class of three in 1926; it was a major event. In honor of the occasion, the Senate closed its doors and all of its members attended the function.

Since then, more schools have been opened. In 1945, the Tubman National Institute of Medical Arts (TNIMA) graduated its first class; and in 1947, the Ganta program was approved by the Liberian Board for Nursing. In 1965, Cuttington University College established the first baccalaureate program for nurses. In 1988, the Mother Pattern College of Health Sciences was accredited by the Board.

The right to practice nursing in Liberia was initially enacted into law in 1949, with the organization of the Liberian Board of Nursing and Midwifery. The Board has the responsibility to assess the strengths and weaknesses of programs and to accredit the programs. Recognizing the need to review the curricula to meet the changing health care needs of the country, the Board requested the South East Region Primary Health Care Project (SERPHC) to undertake this task.

The request was timely as it coincided with the SERPHC project's curriculum efforts to standardize and strengthen mid-level health workers' curricula, particularly in primary health care. A group of faculty members from the diploma and collegiate RN program, along with the members of the Board and the SERPHC training team undertook the major task of reviewing and revising existing curricula in February 1987.

The curriculum had not been revised since 1987. The Board, realizing the need to revise the curriculum, organized a two-day workshop in September 2000 to review and revise the Nursing and Midwifery curricula. Due to financial problems faced by the Board, this exercise was not completed. The Board requested assistance from the Ministry of Health for the curriculum revision. In 2001, the Ministry provided financial assistance to the Board to revise the curriculum for nursing and midwifery schools in Liberia.

The methodology used was to look at the health needs of the community, the job descriptions of nurses and midwives, the national health plan, and epidemiological reports from the various hospitals and clinics. These documents were the basis for the revision of the curriculum. The principles for accreditation were discussed and reinforced and those relevant to the curriculum process are:

- The educational philosophy and purposes of the school should be formulated and accepted by the faculty; the philosophy should be clearly stated and well defined as to the experiences offered to the students
- Each member of the faculty should be well prepared in his or her special area
- There should be provision for the continuous development, implementation and evaluation of curriculum by the faculty group

- The institution should have adequate clinical resources in terms of availability, scope, variety and physical facilities, so as to provide efficient, quality nursing care
- The institution should make provisions for a conducive environment and atmosphere for good instruction learning
- The library should be adequate and should provide students and faculty with up-to-date materials to provide valuable means of extending knowledge and understanding, as well as developing themselves professionally in their leisure time

In 2007, the United Nations Funds for Population Activities, through the Family Health Division, and the Ministry of Health and Social Welfare provided funds to the Liberian Board for Nursing and Midwifery to review the curriculum and revise, paying attention to issues affecting the health care delivery system, especially issues connected to the high maternal and child mortality rates in Liberia.

The participants at the curriculum revision conference were members of the Liberian Board for Nursing and Midwifery, instructors from the various nursing institutions, WFP Nutrition Unit, Malaria Control, TB and Leprosy Control, EPI Division and NACP. This tedious but interesting challenge was accomplished at the end of a month of intensive sessions. The competency-based approach to curriculum development was adopted using the five-step curriculum development process.

The effort was worthwhile and the architects of the curriculum were pleased with the results. The revised curriculum has a very strong component in nutrition, immunization, emergency obstetric care, reproductive health and primary health care, a minimum of redundancy, and interesting and relevant teaching methodologies with more emphasis on participatory learning. It was an opportunity to share ideas and to standardize the curriculum.

In 2009, with the RBHS Project, the curriculum was reviewed and updated, looking at the updated job description and core competencies. Moreover, the choice of subject matter was also informed by the results of the task analysis.

This edition of the curriculum is a result of changes made between 2011 and 2013, after the curriculum was approved. It has been used to graduate two classes of registered midwives and includes many comments from both national and international sources, including the Liberian Board for Nursing and Midwifery (LBNM), which supported meetings to obtain comments. Therefore, this curriculum contained many updates.

# 2009–2011 Curriculum Strengthening Process - Registered Midwife (RM)

## Background

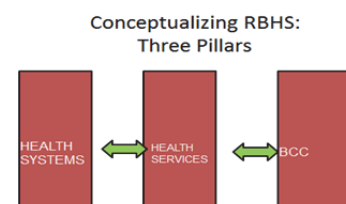
Five years after emerging from prolonged and devastating civil wars, Liberia is beginning to make some degree of measurable progress on a range of economic and social outcomes. The impact of the conflicts on the health sector were as severe as on any other and included loss of staff, destruction of infrastructure, disruption of health programs, lack of resources and resultant increased dependence on international donors.

The Ministry of Health and Social Welfare (MOHSW) has emerged as one of the strongest and most effective government entities, demonstrating strong leadership and vision. It developed a sound National Health Policy and Plan, collaborated effectively with its partners and is taking the lead on setting national policies, strategies, and plans. The cornerstone of the Liberian National Health Plan is the MOHSW's Essential Package of Health Services (EPHS), which outlines the essential services to be provided at each level of the health system.

Early indications suggest that there have already been improvements in some important health outcomes. Infant and child mortality have been reduced considerably since earlier in the decade and now compare favorably with regional rates. However, the maternal mortality ratio remains elevated at a troubling level and is still one of the highest in the world.

The Rebuilding Basic Health Services (RBHS) project, a joint collaboration between the United States Agency for International Development (USAID) and the MOHSW, is the United States government's major initiative in support of the MOHSW. Funded by USAID, RBHS is a partnership among JSI Research and Training, Jhpiego, the Johns Hopkins University Center for Communication Programs (JHU CCP), Management Sciences for Health (MSH), and six non-governmental organization (NGO) partners: Africare, EQUIP, IRC, MERCI, MTI, and PSI. RBHS implementation is over a five-year (2008-2013) period and is guided by a three-pronged strategic approach:

- Strengthening and extending **service delivery** through performance-based grants to NGO partners (IRs 1 and 3);
- Strengthening Liberia's **health system** in the areas of human resource management, infrastructure, policy development, and monitoring and evaluation (IR 2); and
- Preventing disease and promoting more healthful behaviors through **behavior change communication** and community mobilization (IRs 1, 2 and 3).



In addition, the RBHS project has specific responsibilities in the areas of maternal and child health, family planning/reproductive health, malaria, HIV, tuberculosis, community level activities and water and sanitation.

### **Pre-service Strengthening Initiative/RBHS**

Jhpiego was brought on as a key implementing partner to lead the Pre-service Strengthening Initiative by JSI, the prime contractor, in sharing technical expertise in reducing maternal and neonatal morbidity and mortality through evidence-based best practices. Jhpiego was to do this primarily by strengthening two educational institutions, TNIMA and EBSNM, focusing on Registered Nurses (RNs), Certified Midwives (CMs), Physicians Assistants (PAs) and Environmental Health Technicians (EHTs), so that the long-term capacity of Liberia to deliver qualified professionals will affect the exceedingly high rates of maternal and neonatal morbidity and mortality. TNIMA and EBSNM provide educational programs for Certified Midwives, in addition, TNIMA provides educational programs for other cadres including, PAs, RNs, MLTs and EHTs. After the first year of implementation, the MOHSW through Dr. Bernice Dahn, Deputy Minister/CMO requested RBHS to add revision of the curriculum for training Medical Laboratory Technicians (MLTs) developed by TNIMA through an independent consultation.

The Pre-service Strengthening Initiative aims to improve, the pre-service training of direct entry, mid-level health care providers; the teaching skills of instructors and clinical preceptors, the educational environment at learning institutions and clinical sites (health facilities) and the overall management of these institutions. Standard-Based Management and Recognition (SBMR®), a quality performance improvement process developed and being use by Jhpiego, was also initiated. Major activities included effective teaching skills training, technical updates, follow-up, mentoring and monitoring for faculty and clinical preceptors; developing and equipping the computer and science labs; simulation center/skills lab and library; revising and harmonizing the various curricula, updating and making them appropriate for present realities in Liberia.

### **Curriculum Revision/Update/Harmonization**

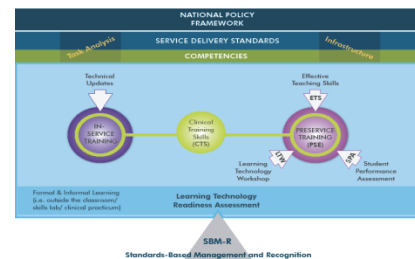
In developing the curriculum for training students to become CMs, all stakeholders—including those in the Education and Training National Working Group, TNIMA, the Liberian Board for Nursing and Midwifery (LBNM), Liberian Midwifery Council, Division of Nursing and Midwifery/MOHSW, University of Liberia, USAID, WHO, UNICEF, etc.—participated in a three-step, inclusive process to develop the competency-based curriculum for training RMs as follows:

- 1. Updated Job Description and Development of Core Competencies:** The initiation of this process coincided with the process by the LBNM to revise the job description for CMs and the development of the regulatory framework and core competencies. The Education and Training Advisor, RBHS, led the process supported by the LBNM, and the first draft of the job description and core competencies was produced using resources from the Liberian and international community, especially the core competencies of the International Confederation of Midwives (ICM) and the West African College of Nursing (WACN) to adapt appropriate ones for Liberia.

2. **Short Term Technical Assistance (STTA):** Dr. Peter Johnson, Director, Global Learning, Jhpiego, as STTA, led in the harmonization of the curriculum with 32 clinical leaders, educators, and administrators representing education institutions, health facilities, MOHSW, regulatory bodies and associations focusing on harmonization of the midwifery curriculum with others in West Africa—as mandated by the WACN for all member countries across the region, in a three step process:

- Validation of the draft Liberian midwifery core competencies
- Reviewing of each course syllabus—33 course syllabi were matched to one or more core competencies, broad objectives—suggested teaching methods and resources needed were discussed in brainstorming and small group working sessions.
- Assembling a logical program of study, which recommended the duration of training for the direct entry program for CMs be increase to reflect present realities of responsibilities and provide an opportunity for CMs to become RMs and later to be able to obtain BSc degrees as a means of promoting a career ladder. This would help increase the retention of midwives who were now needed more than ever in helping to reduce the extremely high MMR of 994/100,000 and obtaining the MDGs.
- The updated job description, core competences and RM Three Years Curriculum Outline was presented and approved by the LBNM and endorsed by the MOHSW.

3. **Developing Pre-service and Clinical Quality Improvement Standards:** Utilizing the Pre-service Implementation Guide, the pre-service education initiative, RBHS adapted the SBM-R process, which was developed in 2005 by Jhpiego and it is being used to improve the performance of two educational institutions, TNIMA EBSNM, and the six health facilities serving as clinical sites for training students from both institutions.



SBM-R is a four step process of **setting standards** of performance in an operational way, **implementing the standards** through a streamlined and systematic methodology, **measuring progress** to guide the improvement process toward these standards and **recognizing the achievement** of the standards. It focuses on desired level of performance and quality to be attained. As one of its first activities in the initiative, RBHS led an exercise in April 2009 involving diverse stakeholders in training health workers to develop a set of **pre-service educational performance standards** based on the world Federation of Medical Education and WHO pre-service education standards in four areas, **classroom and performance assessment, clinical practice and assessment, infrastructure, and institution management**. The pre-service education standards have been adopted by the



LBNM as national pre-service education standards for nursing and midwifery education in Liberia.

In the process of strengthening health care service delivery at health facilities serving as clinical sites for the two schools, RBHS again led the process of developing **clinical performance standards** involving all key stakeholders, particularly those involved in delivery of health services. The clinical standards were adapted from internationally recognized clinical standards for the Liberian context. Based on the EPHS, standards were developed for infection prevention, management of health facilities and 17 clinical content areas that were sub-components of the six EPHS components (maternal and newborn health; child health; adolescent sexual and reproductive health; communicable diseases; mental health; and emergency care). RBHS and the MOHSW has adapted these standards and are using minimum required standards in ten areas for quality improvement in the MOHSW four-step, quality improvement process of: identifying the standards, measuring the standards, implementing the standards, and recognizing the standards.

- 4. Conducting a task analysis:** Using the updated job description and core competencies, and in consultation with relevant Jhpiego staff and stakeholders, the Pre-service Strengthening Initiative developed the tool for conducting a task analysis. This task analysis was conducted primarily to inform updates to the core competencies, curricula and job descriptions of the PAs for improvements in pre-service education. This will ensure a streamlined, competency-based education process that is linked to job readiness for an entry-level position and job descriptions that are in line with national needs, as well as, to provide some evidence for the services that are included in the EPHS and/ or adjustments that may be appropriate. The task analysis tool for the CMs contained 264 tasks spanning infection prevention, health facility management and the 17 priority health areas specified in the six components of the EPHS. These areas had been outlined as critical to promoting public health in Liberia. The task items, which represents the tasks that CMs are expected to perform, were selected after consulting the EPHS and the clinical standards developed by the Education and Training National Working Group (ETNWG) and other key stakeholders. The ETNWG reviewed the selected tasks used to develop the survey. The tool followed the same format. For each task, the respondent was asked three major questions:

- How often the task was performed: **Frequency** (Never/Rarely/Daily/Weekly/Monthly)
- Were you trained to performed the task: **Training Status** (Yes/No)
- Where were you trained to performed the task: **Training Location** (School/Job/Both)

The key findings for the midwives indicated that they are the primary providers of maternal and newborn health/Basic emergency obstetric and newborn care, and family planning services, unlike the RNs and PAs and even though their two-year training program was limited in other areas, like pediatrics or medical surgical care

and grossly limited in management, they are expected to perform tasks in these areas a significant number of time in hospital outpatient departments, clinics and health centers.

The analyzed data was utilized as key evidence for revising the job description and core competencies, and curriculum in ensuring that they are relevant to meeting national needs. With the approval of all stakeholders, including the MOHSW and the LBNM, it was agreed that the revised updated competency-based curriculum for training RMs is to include all frequently performed task as well as task that enhance quality of life.

- 5. Development of Syllabi for Courses and Validation of the Curriculum:** Individual course syllabus were developed for all courses in the curriculum by international and national content/subject matter expert, including experts at Jhpiego, the Johns Hopkins University, the ETNWG, including faculty of the eight nursing and midwifery schools, A.M. Dogliotti College of Medicine/UL and others.
- 6. Validation Workshop:** A validation workshop was done and the sequencing, title, as well as each course syllabus in the curriculum was reviewed. The objectives of the workshop were: 1) to review and endorse the revised, updated job description and draft core competencies for RMs; and 2) to confirm the adequacy of the draft curriculum for meeting training needs of RMs. Comments/changes, including additions primarily due to the findings of the task analysis, were agreed upon and noted.

**Finalization of the curriculum:** All the comments were incorporated into the courses and the finalization process included sharing the course syllabus with experts and incorporating comments. Dr. Mertens also reviewed the entire curriculum with the faculty at TNIMA. This edition of the curriculum is a result of changes made between 2011 and 2013 after the curriculum was approved and used to graduate two classes of registered midwives from EBSNM, TNIMA and MTP/SER. Many comments received from both national and international organizations.

Also as a result of this inclusive and dynamic process, included in this updated competency-based curriculum for training RMs are updates from the National Health Policy and components from the Essential Package of Health Services (EPHS), 2011-2021, which is the “present framework developed by the MOHSW to continue improving basic health services provision in a post-conflict setting. The EPHS focuses on strengthening certain key areas that continue to perform weakly in the current system and the scaled-up of and additional services for all levels of the health care delivery system in order to provide more comprehensive services to the Liberian people.”

This curriculum emphasizes updated material on high impact, evidence-based interventions and appropriate technology for improve maternal, neonatal, and child health and EmONC; adolescent sexual and reproductive health; HIV/AIDS and TB, including PMTCT and DOTS; malaria case management and prevention, emphasizing ACT, IPTp, use of RDT and early treatment, especially for under-fives; Nutrition, especially the ENAs; IMNCI; non-communicable disease and neglected tropical diseases management; management and prevention of sexual and gender based

violence; as well as family planning counseling and service. Regarding community health, the curriculum stresses the importance of community participation and working with and not for the community in the transformative approach using adult/dialogue education principles. Some course (objective and content) have been expanded and appear as notes. This is due to the results of the task analysis, which showed that professional did not have updated information and needed these notes, even though most teachers have now received these technical updates.

Emphasis is also placed on multi-mix teaching and learning methods for interactive presentations that promote learning. The importance of student performance assessment is highlighted in best practices assessments recommendations in this curriculum for both theory and practical courses.



# Background

## **Demographics:**

The Liberian population is about 3.5 million with a fertility rate of 5.2%. The teen age pregnancy rate is 31%. Illiteracy and poverty rates are 38.3% and 3.8% respectively.

The maternal mortality rate (MMR) in 1999/2000 was 578/100,000 live births, more than twice that in 1986, which was 260/100,000 live birth, Ministry of Planning and Economic Affairs (MPEA, 1999/2000). More recent data from inpatient mortality statistics generated by health facilities suggested an even higher MMR of 1,370/100,000 live births in (2000) (MOH/SW 1999/2000). The Liberia Demographic and Health Survey (LDHS, 2007) reported that the MMR is 994/100,000 live births, and the WHO/UNICEF/UNFPA best estimate in 2010 is 770/100,000.

Early indications suggest that there have already been improvements in some important health outcomes. Infant mortality has reduced considerably from 144 per 1000 live births in 1986 to 71 per 1000 live births in 2007 and presently at 53 per 1000 (Count Down to the MDG 2010). Child mortality declined from 220 per 1000 live births to 110 per 1000 live births (LDHS, 2007) and now stands at 80 per 1000 as cited by the Count Down to the MDG 2010. However, the maternal mortality ratio, which remains elevated at a troubling level 770 per 100,000 live births and is still one of the highest in the world, has led donors, stake holders, and Government to see the need to provide midwifery education to reduce the high maternal mortality by 50% and place emphasis on all maternal and child health services to achieve Millennium Development Goals (4, 5, and 6) by the year 2015.

## **Priority Health Problems:**

HIV/AIDS and malaria in pregnancy, tuberculosis, emerging and re-emerging hemorrhagic communicable diseases (Lassa fever and hepatitis B), violence, accidents, poor environmental hygiene, and malnutrition.

## **Target learners:**

High school graduate with WAEC certificate and diploma who meets all of the admission requirements.

## **Midwifery work force management:**

Midwives are frontline service providers in the community, clinics, health centers, and hospitals. They provide preventive services, health promotion, and curative care to all reproductive ages. They also provide antenatal, intra-partum, and postpartum care at all levels including clients' families and participate in the management of health care delivery system.

## **Rationale:**

To bridge the gaps found in the two-year midwifery curriculum in order to reduce the mortality rates associated with motherhood.

**Vision statement:**

To produce competent and efficient registered midwives who will provide quality maternal and newborn care.

**Mission statement:** To provide quality midwifery services in Liberia and the West African Region.

**Philosophy:**

The philosophy of midwifery education in Liberia is based on the concepts of client, health, midwifery, environment, and midwifery education. The philosophy at all schools is consistent with the ICM Philosophy and model of care in which even though childbearing is a profound experience, which carries significant meaning, birth is a normal physiological process and midwives are the most appropriate care providers. Midwives, in partnership with women, can attend to them during pregnancy, labor, birth and the postnatal period, combining the art and science of caring in a holistic nature. Care is grounded in an understanding of the social, emotional, cultural, spiritual, psychological and physical experiences of women and based upon the best available evidence, with the woman as the primary decision-maker in her care. And she has the right to information that enhances her decision-making abilities.

**Client:**

Clients are diverse individuals, families, groups, communities, and/or populations across their lifespan, with midwifery needs within the context of one's social-cultural backgrounds, with individuals perceived and respond to as integrated wholes. Clients maintain basic human integrity through the process of dynamic continuous interaction with their internal and external environment.

**Health:**

Health is a state of physical, mental, social, and spiritual well-being and not merely the absence of disease or infirmity (WHO, 2003). The reproductive health of individuals is affected by their genetic makeup, personal behaviors, and their internal and external environments. The health status of individuals, families, populations, and communities is a result of dynamic interaction between humans and their external environments.

**Environment:**

The environment in which individuals exist is crucial to their learning, health, and well-being. It includes the cultural, social, political, spiritual and economic influences on the individual. A conducive environment considers both internal and external factors such as effective customer service, adequate infrastructures, use of multimedia, appropriate student-faculty ratio, appropriate learning and teaching methodologies, and professional student-faculty relationship that influence learning and provision of quality health care. Monitoring and modifying the interactions of the individual within the environment is a required and continuous process.

**Midwifery:**

An autonomous profession, that covers culturally sensitivity provision of support, care and advice in partnership with the women to promote self-care and the health of mothers before, during pregnancy and labor, and following childbirth. It also includes

provision of care to infants, children, adolescents and families. It involves promoting respect for human dignity and for women as persons with full human rights. It advocates for women so that their voices are heard; is culturally sensitive working with women and other health care providers to overcome those cultural practices that harm women, newborns, infants, children and adolescents (ICM, 2005 as cited by The Regional Professional Regulatory Framework for Nursing and Midwifery).

### **Midwifery Education:**

Midwifery education is competency based and is centered on humanistic, scientific and adult education principles using a variety of teaching and learning strategies to promote the development of midwifery competencies. The educational midwifery environment supports and promotes the growth and self-sufficiency of individual learners as beginning professionals and life-long learners.

Midwife educators believe that learning is a versatile process through the attainment and incorporation of knowledge and skills, clarification and formation of values and attitudes that outcomes in behavioral change. This process is geared toward an independent critical thinking, group interaction, evidence-based learning, leading students to reach correct conclusion and stressing the use of learned ideas in new situations.

### **Conceptual Framework:**

The aim of midwifery education is to provide a curriculum in a climate that fosters life-long learning, and resources where students can acquire values, knowledge, and skills used in practicing theory-based midwifery. We are challenged to create and implement a curriculum that will facilitate the development of our future midwives in theory, research development and practice.

The discipline model was adopted from several theorists; however, Imogene King's Interaction Theory was used as the basis for the development of the discipline for the Liberian Board for Nursing and Midwifery Curriculum. The midwifery faculty, who convey the image of midwifery education to the students, uses these theories. Courses are selected based on the strands derived from the philosophy, objectives and conceptual framework.

King's theory of goal attainment shows the relationship of operational systems (individual, interpersonal systems, groups such as midwife – patient) and social systems (such as educational systems, healthcare systems).

King identifies the following concepts as essential knowledge for midwives to utilize in midwifery situations. These concepts include interaction, perception, communication, transaction, role, stress, growth and development, and time and personal space. Interaction—a process of perception and communication between person and environment and between person and person, represented by verbal and nonverbal behaviors that are goal-directed. Each individual in an interaction brings different knowledge, needs, goals, past experiences and perceptions that influence the interaction.

Specifically, in midwifery the woman is recognized as the central focus, the midwife as the provider or ‘instrument’ of ‘midwifery care’, the professional partnership or ‘alliance’ that forms between them, and the environment in which this occurs—which may be the home, community or health facility.

**Perception:**

Is defined as the “each person’s representation of reality”. According to Imogene King, this concept includes the import and the transformation of energy, and processing, storing and exporting of information. Perceptions are related to past experiences, concepts of self, socioeconomic groups, biological inheritance and educational background.

**Communication:**

Is a process where information is given from one person to another either directly or indirectly. Communication is the information component of the interactions. The exchange of verbal and nonverbal symbols between midwife and client and environment is communication.

**Transaction:**

Is purposeful interaction that leads to goal attainment. It is observable behavior of human beings interacting with their environment. It is the valuation component of human interaction.

**Role:**

Is a set of behaviors expected of persons occupying a position in a social system; rules that define rights and obligation in a position. If the expectations of a role differ, then conflict and confusion exists. This may lead to decrease effectiveness of the midwifery care provided.

**Stress:**

Is a dynamic state whereby human beings interact with the environment. Stress involves an exchange of energy and information between the person and the environment for regulation and control of stressors. It is an energy response of an individual to persons, objects and events. An increase in stress of individual interacting can narrow the perceptual field, decrease rationality, and increase in stress may also affect midwifery care.

**Growth and Development:**

King defines growth and development as continuous changes in individuals at the cellular, molecular, and behavioral level of activities, conducive to helping individuals more towards maturity.

**Time:**

Is defined as a sequence of events moving onward to the future; time is duration between one event and another as uniquely experienced by each human being.

**Space:**

Is defined as existing in all directions and is the same everywhere. Space is the immediate environment in which the midwife and client interact.

The overall assumptions of King's Theory are that the focus of Midwifery is human being interacting with their environment leading to a state of health for individuals, which is an ability to function in social roles (Marriner, 1989; King, 1981). King's theory asserts that midwives interact and mutually set, explore, and agree to achieve goals. Goal attainment represents outcomes. King's theory offers insight into midwife's interaction with individuals, groups, and the environment. It highlights the importance of clients' participation in decision making that influences care and focuses on both the process of midwife-client interaction and the outcome (Berman, Snyder, Kozier & Erb, 2008).

The goal of midwifery is to use communication to help client re-establish a positive adaptation to his/her environment; and the framework for midwifery practice is the utilization of a midwifery process that involves an interpersonal and interactive process between the midwife and client (individual, family, group, community).

**Characteristics of the Graduate:**

Has attained/demonstrated, at a minimum, the current ICM essential competencies for basic midwifery practice; meets the criteria of the ICM definition of a midwife and regulatory body standards leading to licensure as a midwife and is a knowledgeable, autonomous practitioner who adheres to the ICM international code of ethics for midwives, standards of the profession and established scope of practice within Liberia as legally recognized.

The graduate will be affective and compassionate, assertive, skillful and knowledgeable, autonomous, respectful, and a committed worker. He/she will also be a lifelong learner, possess interpersonal skills, must be accountable and responsible, cultural sensitive, critical thinker, and problem solver.

**Entry Requirements:**

Candidates for the Registered Midwifery Program must:

- Be a high school graduate with a West African Examination Council (WAEC) certificate
- Pass Biology and Chemistry on the West African Examination Council (WAEC) exam
- Pass the entrance examination of the institution
- Pass the interview at the institution
- Present health certificate from licensed doctor
- Age range from 18-50 years

**Be able to present:**

- Health certificate from a licensed doctor
- Letter of application
- Three years of a high school transcript
- WAEC examination certificate
- Two letters of recommendation
- Two passport size photos
- School fees according to the institution's requirement

**Nature of the Program:**

A generic program for registered midwives (a minimum of three years). Graduate must pass the Liberian Board for Nursing and Midwifery Exam to obtain a license.

**Curriculum Model:**

A competency-based curriculum, delivered through a straight, full time institutionalized three years period.

**Program Goal:**

To educate professional midwives who will function autonomously and collaboratively within their scope of practice and deliver evidence-based midwifery care to individuals, families, and community meeting the ICM core competencies

**Program Objectives:**

Upon the completion of the Registered Midwifery program, the graduate will be able to:

1. Demonstrate skills in integrating midwifery theory, social sciences, and evidence-based practice in planning, providing, and evaluating care for clients focusing on midwifery clients throughout their professional practice.
2. Manage complications within their Scope of Practice during antenatal, labour and post-natal periods of the childbearing cycle
3. Provide competent and holistic care to midwifery clients at all levels of the health care (community, primary, tertiary) in and outside of the hospital setting.
4. Function independently and in collaboration with other members of the health Team at facility and community levels to provide comprehensive maternal and child health services and reproductive health/family planning.
5. Sensitize, educate and mobilize the community through the implementation of social and behavior change communication (SBCC) strategies to take responsibility at the primary, secondary and tertiary levels focusing on improving reproductive, maternal, neonatal and child health (RMNCH).

6. Use available technology to recall, access, manage, and research evidence-based practice in RMNCH/midwifery.
7. Work in a culturally diversified setting using ethical and moral standards.
8. Demonstrate skills in health facilities management and effectively organizing and managing RMNCH clinics to achieve the goals of health by utilizing available human and materials resources
9. Teach in clinical areas, communities, and midwifery institutions, supervising/ precepting/mentoring the clinical experience of student midwives and other community health workers.
10. Apply leadership skills, political awareness and collaborative strategies in interacting with the individuals, families, groups and community
11. Seek opportunity to continue and advance education in midwifery.
11. Demonstrate responsibility and accountability in practice.
12. Apply critical thinking in the provision of midwifery care.

# Job Description Registered Midwife (RM)

**Title:**

Certified Midwife (CM)/Registered Midwife (RM)

**Scope of Work:**

A Registered Midwife/Certified Midwife is one who is prepared at a diploma level in midwifery practice, management, clinical teaching, reproductive health and research to provide maternal and child health service planning in the hospital, health center, and clinic or in the community/home.

**Educational/Professional Qualifications:**

A graduate from an accredited midwifery program with a current license to practice

**Line of Authority:**

Supervises the CMs/RMs and/or other staff assigned to him/her, as well as, the TTMs

**Duties:**

The midwife will do the following:

- Promote health:
  - Participate fully as a member of the health care team
  - Implement PHC activities in his/her area of assignment
  - Share relevant research findings with individual, family and community
  - Counsel mothers/clients as necessary, especially in FP/RH
  - Provide preventative services, health education and BCC services to individuals, families, groups, and communities, especially in any or all of the following areas: malaria, family planning, ANC, PNC, newborn, prematurity, including Kangaroo Mother Care (KMC), adolescent reproductive health, mental health, EPI, IMNCl, nutrition, STI, HIV, and TB.
- Prevent illness, accidents and complications:
  - Assess health needs of the individual, family and community
  - Provide secondary prevention measures and treatment to patients, families, groups and communities with malaria, med/surgical concerns, malnutrition, STI, HIV or AIDS, obstetrical emergencies, including, PPH and pre-eclampsia, infections, wounds, adverse reactions to immunizations, asthma, burns, TB and other opportunistic and emerging diseases in accordance with protocols and standards at each level of health care(Community, clinic, health center and hospital)
  - Share health messages with the individual and family
  - Maintain infection prevention and control measures



- Notify births and neonatal deaths
- Ensure safety in the workplace
- Provide midwifery services:
  - Assess the health needs of the individual, family and community
  - Promote healthy timing and spacing of pregnancy (HTSP)/healthy family life, planned pregnancies and positive parenting through provision of health education, counseling and service delivery of all short and long acting contraceptive methods.
  - Provide high-quality antenatal care to maximize health during pregnancy, including early detection and treatment or referral of complications.
  - Provide high-quality, culturally sensitive care during labor and conduct clean and safe delivery
  - Provide comprehensive, high-quality, culturally sensitive essential neonatal care, including Kangaroo Mother Care (KMC) for the premature and postpartum care for women.
  - Provide a range of individualized, culturally sensitive abortion-related care services for women requiring or experiencing pregnancy termination or loss that are congruent with applicable laws and regulations and in accordance with national protocols.
  - Prescribe drugs used in midwifery, prenatal, labor and puerperium.
  - Formulate midwifery diagnosis, plan care and implement care.
  - Monitor and evaluate care given.
  - Recognize mothers need further management, prioritize care and refer as appropriate.
  - Recognize and manage obstetric emergencies/complications, including initial management, treatment and referral within Scope of Practice according to protocols and standards.
  - In obstetric emergency situations, be able to make appropriate and timely arrangements to ensure optimal care for the mother and child.
- Provide Reproductive health services:
  - Participate in the reproductive health programs for patients and clients to include:
    - Adolescent reproductive health
    - FP Counseling and service
    - Post-abortion care
    - SGB violence care, including clinical management of rape

- Plan, implement and evaluate maternal, child and reproductive health care
- Promote quality maternal, child and reproductive health services and care through innovative teaching and staff development
- Participate in reproductive health care of high-risk groups to include the adolescent
- Give safe and evidence-based care to the mother and the newborn during delivery and immediately afterwards
- Management and leadership skills:
  - Manage midwifery services including, prenatal, labor and delivery, postpartum and neonatal services on the OB/maternity ward, clinics and health centers
  - Apply principles of management and leadership skills in his/her day-to-day activities
- Participate in decision making at policy level regarding midwifery services
- Ensure accountability in care of self and others
- Collaborate with multidisciplinary and inter-sectorial team members in providing care
- Advocate for policies that are in the best interest of patients and staff
- Follow performance standards to promote quality in midwifery practice in order to provide safe, effective and ethical care
- Teaching and training:
  - Participate in midwifery teaching and training of midwives, nurses and other health personnel in the clinical area or community
  - Assess midwifery educational/training needs of students in clinical setting
  - Participate in midwifery clinical instruction of students in the hospital, health centers and clinics
  - Participate in midwifery training and supervision of community health workers from the clinic level
  - Participate in the health education of community members as individuals and in groups.
  - Assess continuous professional needs
  - Develop and implement midwifery education/training programs in the clinical areas
  - Identify and develop educational resources for midwifery clinical instruction: i.e., equipment and material

- Research:
  - Provide evidence-based clinical services to the mother and community using diagnostic and treatment competencies
  - Generate knowledge through the identification of danger signs to mother and child
  - Participate in research related to midwifery and MNCH care/services

# Core Competencies for Registered Midwives

## Summary:

The following essential competencies for Registered Midwives (RM) were adapted/developed using primarily the following documents: 1) ICM regulation series; Nursing care continuum framework and competencies; 2) Australian Nursing and Midwifery council.

The Liberian Board of Nursing and Midwifery, The Liberian Midwifery Council (LCM) and the Nursing and Midwifery Division/MOHSW acknowledges that this is the beginning and that the content, methods and process of further identification and developing/adapting of core competencies for RMs will be reviewed within a maximum of two years.

These core competencies are based on two critical factors; Midwifery care, like all health care should be dynamic and responsive to societal needs and changes; Midwifery continually evolves with advances in Midwifery knowledge and technology and RMs must fulfill multiple roles.

These core competencies also describe the values, vision, strategies and actions used by those who provide midwifery education and services to the population in Liberia. The competencies are integrated into four primary domains and provision of care reflects the ICM core competencies as follows:

## I. Professional, Legal and Ethical Practice Competencies:

- Relates to accountability, functioning morally in accordance with legislation affecting midwifery and health care
- Functions independently and collaboratively with allied health professionals and the inter-sectorial team to provide comprehensive maternal and child health care services in the community
- Plans, establishes, organizes and manages antenatal, postnatal, family planning and infant welfare clinics
- Manages clients during pregnancy, labor, delivery and puerperium
- Anticipates/recognizes risk factors and takes prompt action and refer where necessary
- Practices in accordance with the midwifery profession's codes of ethics and employer's code of conduct with acceptance and respect of individuals/groups regardless of race, culture, religion, age, gender, sexual preference, physical or mental state, and ensures that personal values and attitudes are not imposed on others

- Engages in effective ethical decision-making with respect to own professional responsibilities or where ethical issues affect the broader health care team
- Maintains confidentiality and security of written, verbal and electronic information acquired in a professional capacity
- Respects the women's right to privacy, dignity, right to information, choice and self-determination in midwifery and health care
- Challenges behavior and health care practices that could compromise safety, privacy or dignity of the women and neonate
- Practices in accordance with professional, relevant civil legislation, jurisdictional and local policies and procedural guidelines affecting midwifery practice
- Formulates documentation according to legal and professional guidelines according to legal requirements that is contemporaneous, comprehensive, logical, legible, clear, concise and accurate, which identifies the midwife and title designation

## **II. Provision of Midwifery Care Base on ICM Essential Core Competencies:**

- Possess the requisite knowledge and skills from the social sciences, public health and ethics that form the basis of high-quality, culturally relevant, appropriate care for women, newborn and childbearing families
- Provide high-quality, culturally sensitive health education and services to all in the community in order to promote healthy family life, planned pregnancies and positive parenting
- Provide high-quality antenatal care to maximize health during pregnancy and that includes early detection and treatment or referral or selected complications
- Provide high-quality, culturally sensitive care during labor, conduct a clean and safe delivery, and handle selected emergency situations to maximize the health of women and their newborn according to the Scope of Practice in Liberia
- Provide comprehensive, high-quality, culturally sensitive postnatal care for women
- Provide high-quality, comprehensive care for the essentially healthy infant from birth to two months of age
- Provide a range of individualized, culturally sensitive, abortion-related care services for women requiring or experiencing pregnancy termination or loss that are congruent with applicable laws and regulations and in accord with national protocols
- Applies life-saving skills within scope of practice according to the Liberian legal and regulatory requirements during emergency obstetric and neonatal care
- Midwives apply leadership skills in planning and management of MNCH Services

### **III. Critical Thinking and Analysis Competencies:**

- Includes leadership and management skills of delegation and supervision, ensuring a safe environment and inter-professional health care
- Manages the midwifery care of women and their babies by organizing workload to facilitate midwifery care for client and their babies, demonstrating appropriate time management and priority setting skills and ensures the effective use of resources including personnel
- Teaches other health personnel including students in maternal and child health services
- Guides and supervises the practice of other health personnel, including students, in maternal and child health services
- Confronts conflicts in a non-judgmental manner, making effective use of communication skills and existing mechanisms to achieve resolution
- Contributes to team leadership by reinforcing goals so as to promote respect and confidence amongst the team and be able to articulate own leadership contributions, support and expectations of team members
- Provides feedback, offers suggestions for changes and deals effectively with the impact of change in own practiced or on the organization
- Uses appropriate assessment tools to identify actual and potential risks to safety and reports concerns to the relevant authority
- Takes timely action through the use of quality improvement, risk management strategies to create and maintain safe care environment and meet national legislations and workplace health and safety requirements, policies and procedures
- Understands and values the roles, knowledge and skills of members of the health team in relation to own responsibilities, and accepts delegated activities in line with personal level of proficiency and legal scope of practice and contributes to policy and protocol development that relates to delegation of clinical responsibilities
- Functions independently and collaboratively with allied health professionals and the inter-sectorial team to provide comprehensive maternal and child health care services in the community
- Educates the community on family planning and administers contraceptive devices in accordance with socio-cultural values and needs of the people
- Sensitizes, mobilizes and educates the community for active participation in health care activities

#### **IV. Professional, Personal and Quality Development Competencies:**

- Promotes the enhancement of midwifery through continuing education with values on evidence and research for quality improvement
- Promotes and maintains a positive image of midwifery while practicing within an evidence-based framework
- Identifies the relevance of research to improving individual health outcomes for women and their neonates
- Uses best available, relevant literature, research findings evidence, midwifery expertise and respect for the values and beliefs of individuals/groups in the provision of midwifery care and to improve current practices
- Acts as an effective role model for students and within the care team and participates in ongoing professional development of self and others using best available evidence, standards and guidelines to evaluate midwifery performance, maintains records of involvement in professional development which includes both formal and informal activities
- Teach other health personnel including students in maternal and child health services
- Guide and supervise the practice of other health personnel including students in maternal and child health services
- Values research in contributing to developments in midwifery and uses findings as a means to improving standards of care while continuously promoting disseminating, using, monitoring and reviewing midwifery standards and best practice guidelines

# Teaching Methodology

As this is a competency-based curriculum, various theories, approaches, strategies and methods will be utilized to facilitate both the acquisition and demonstration of necessary competencies. Adult education, humanistic and apprenticeship theories and principles will be considered in the choice of methods depending on the domain of learning (cognitive, affective, psychomotor), the level of the student and the learning style (visual, auditory, kinesthetic) of the learner, enabling them to obtain the expected competencies outlined in this curriculum. Methods will include demonstration with direct observation that will allow for practice with coaching and feedback to promote assessment of performance, as well as, role play to enable understanding of different values and beliefs, and case studies to promote problem-based learning and critical thinking. Other methods will include interactive lecture, concept mapping, problem-based learning, use of visual/audio and other multi-media materials, peer learning, group discussion, web-based instruction, independent study and community-based learning.

## **Course Expectations:**

- Regularly attend classroom and/or laboratory sessions.
- Complete all clinical hours
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and/or laboratory and clinical practicum
- Complete all assignments and examinations on due dates

## **Assessment Strategy:**

Following the principles of competency-based training, the assessment strategies will allow for criterion-referenced assessments throughout the program. Valid and reliable assessment tools will be for use to determine competency especially in skill demonstration. Strategies will include both formative and summative evaluations in the classroom and clinical settings. Specific strategies will include tests, quizzes, clinical practice, checklist, observation, skills portfolios (log books), clinical skills, case presentations, OSCE, and community assessments.

## **Program Evaluation:**

Will include the following:

- Annual assessment by LBNM utilizing the National Pre-service Education Performance Standards for Nursing and Midwifery Training Institutions, as well as National Clinical Performance Standards for Clinical Sites for Mid-level health Workers
- Accreditation assessment done after three years by the LBNM
- Mid and end of semester evaluation by students



- Semester evaluation by peers and administration

**Program Structure:**

Six semesters of 14 weeks, which include one semester of internship

**Program Timescale:**

Three years, which includes 16 weeks of internship

# Program Content Sequencing

Semester I					Semester II				
Courses	Credit	Theory	Lab	Clinical	Courses	Credit	Theory	Lab	Clinical
Basic English	2	28	0	0	PHC I	2	28	0	0
Basic Math	2	28	0	0	Nutrition	2	28	0	
Fundamentals of Midwifery I	3	42	126	0	Ethical & Prof. Adjustment	2	28	0	0
Anatomy & Physiology I	3	42	42	0	Fundamentals of Midwifery II	4	56	0	168
Integrated Basic Science	3	42	0	0	Anatomy & Physiology II	3	42	42	0
ICT	2	28	84	0	Midwifery I	4	56	0	168
(Psychosocial) Psych. & Soc.	2	28	0	0	Pharmacology & Drug Calculations	4	56	56	0
<b>Total</b>	<b>17</b>	<b>238</b>	<b>252</b>	<b>0</b>	<b>Total</b>	<b>21</b>	<b>294</b>	<b>98</b>	<b>336</b>

Semester III					Semester IV				
Courses	Credit	Theory	Lab	Clinical	Courses	Credit	Theory	Lab	Clinical
Health Assessment	3	42	42	0	Teaching in Midwifery	3	42	0	126
Tropical & Communicable Disease	3	42	0	0	Midwifery III	5	70	70	140
PHC II	2	28		84	Surgical Care	3	42	42	84
Medical Care	3	42	42	84	Psychiatric Mental Health	3	42	0	126
Midwifery II	5	70	70	140	Pediatric I	3	42	42	84
Emergency Health & Disaster Preparedness	2	28	28	56					
<b>Total</b>	<b>18</b>	<b>252</b>	<b>140</b>	<b>406</b>	<b>Total</b>	<b>17</b>	<b>238</b>	<b>154</b>	<b>434</b>

Semester V					Semester VI				
Courses	Credit	Theory	Lab	Clinical	Courses	Credit	Theory	Lab	Clinical
Administration (Leadership & Management)	3	42	0	126	Professional development:				
					1. Workshop (BLSS)	2	28	0	84
					2. Affiliation	4	0	0	400
Simplified Diagnosis & Treatment	3	42	0	126					
Pediatrics II	4	56	0	168					
Introduction to Research	3	42	0	0					
Midwifery IV (Gynecology)	4	56	56	168					
<b>Total</b>	<b>17</b>	<b>182</b>	<b>56</b>	<b>588</b>		<b>6</b>	<b>28</b>	<b>0</b>	<b>484</b>

## Semester VI

EmONC/Basic Life Saving Skills workshop (BLSS): 2 credits all (2 weeks) practicum before affiliation

Affiliation follows the EmONC/BLSS for ten weeks

LBNM Recommended Credit and Instructional Hours	
Credits hours	96
LBNM Recommended Instructional Hours	
Theoretical hours	1232
Lab hours	700
Clinical hours	2248
<b>Total instructional hours</b>	<b>4180</b>

## References:

- Ministry of Health and Social Welfare (2006) Basic package of Health Services
- Ministry of Health and Social Welfare (2011) Essential package of Health Services
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- International Confederation of Midwives (ICM) (2011) Essential competencies for Registered Midwifery practice
- International Confederation of Midwives (ICM) (2010) The Global Standards for Midwifery Education
- ICM Resource Packet #1, 2, 3, 4
- The Regional Professional Regulatory Framed work (2011) WHO Regional office for Africa

N. Grant, (1993). Basic Gynecology and Obstetrics; A large medical book, Appleton and Lange, Connecticut.

J. Coad, (2005)Anatomy and Physiology for Midwives,

D. Frasser, M, Cooper, (2009) Myles Textbook for Midwives, 15th edition

S. Pairman, J. Pincombe, C. Thorogood, S. Tracy,(2006) Midwifery preparation and practice

H. Varney, (2004) Varney's Midwifery, 4th edition

# **Semester I | Course Outline**

**English Communication Skills**

**Basic Math**

**Science: A or B & C**

**A. Integrated Basic Science or**

**B. Microbiology and**

**C. Chemistry**

**Anatomy and Physiology I**

**Course Title: Psychosocial (Psychology/Sociology)**

**Introduction to Computer Technology (ICT)**

**Fundamentals of Midwifery I**



# Course Title: English Communication Skills

## Course Credits:

2

## Placement:

First year, Semester I

## Duration:

28 hours classroom

## Course Description:

This course is for students to improve their verbal and written English skills for interviewing and interacting with patients/clients, their family members and other relevant persons. At the completion of the course, students will apply appropriate professional and scientific terminology for their communication, including medical documentation. Students will also gain and apply effective non-verbal communication techniques.

## Broad Objective:

By the end of this course, the students will be able to establish good interpersonal relationships with a patient/client, family members and other relevant persons using verbal and non-verbal techniques to gather information.

## Specific Objectives:

By the end of the course, the student will:

- Use improved basic formal English grammar, sentence structure and paragraph writing skills
- Apply basic research skills to produce correctly referenced reports
- Utilized improve reading and medical documentation skills to obtain and to record the patient's medical history
- Apply professional verbal and non-verbal communication techniques to establish good interpersonal relationships with a patient/client or his/her family members to gather information

## Course Content:

### Unit 1 | Language and Communication Skills

#### 1. PRETEST

#### 2. EFFECTS OF LANGUAGE ON COMMUNICATION:

- Effective communication skills

## **Semester I**

- Barriers to effective communication
- Two-way communication
- Keys to understanding and being understood

### **3. VERBAL TECHNIQUES:**

- Oral communication
- Written communication

### **4. NON-VERBAL TECHNIQUES:**

- Setting a tone conducive to optimal communication
- Listening
- Observation of patient's non-verbal communication
- Attention to one's own non-verbal communication
- Inter-cultural/inter-tribal sensitivity to unique non-verbal communication
- Construction
- Behavior
- Body language:
  - Posture/gait
  - Facial expressions
  - Gestures
- Touch (tactile defensiveness)
- Physical appearance

### **5. TELEPHONE ETHICS/COMMUNICATION:**

- Voice tone
- Respecting privacy
- Rephrasing
- Paragraph construction



## 6. TECHNIQUES FOR CONDUCTING AN INTERVIEW TO OBTAIN MEDICAL HISTORY:

- Open-ended
- Closed-ended
- Validating questions
- Reflective questions
- Use of silence

## Unit 2 | Focused Reading Skills and Comprehension

- Words and their meaning; vocabulary development
- Roots, prefixes, suffixes
- Antonyms, synonyms
- Context clues
- Inferences
- Facts vs. opinions
- Patterns of academic paragraph organization:
  - Topic
  - Main idea
  - Supporting details
- Paraphrasing
- Speed:
  - Scanning
  - Skimming
- Analysis of simple and complex sentences
- Paragraph contraction

## Unit 3 | Overview of Grammar and Mechanics

### 1. FOUNDATIONS OF GRAMMAR:

- Parts of speech
- Sentence construction and types
- Agreements: subject-verb, pronouns, numbers
- Verb tenses
- Major errors:
  - Fragments, run-on sentences

### 2. BASIC MECHANICS:

- Capitalization
- Punctuation
- Spelling
- Antonyms
- Synonyms

## Unit 4 | Writing Skills

- Documentation
- Reports
- Correct citations of research material
- Presentation

## Unit 5 | Overview of Library Research

- Library system
- Types of resource material
- Reference material
- Computer search
- Bibliography

## Unit 6 | Simple Clinical Filing System

- Action file
- Follow-up file
- Correspondence file
- Clinical skills in filing

### Competencies

Knowledge	Attitude/Behavior	Skills
Understands principles of effective communication through various means.	Accepts responsibility for communicating effectively	Uses clear, concise and effective written electronic and verbal communication
Understands different means of communication	Values different means of communication	Chooses the appropriate means of communication for a specific situation.
Understands the physiological, psychosocial, developmental, spiritual, and cultural influences on effective communication	Values mutually respectful communication Values individual cultural and personal diversity	Assesses barriers to effective communication (language, developmental level, medical condition/disabilities, anxiety, learning styles, etc.)  Makes appropriate adaptations in own communication based on patient and family assessment
Understands the midwife's role and responsibility in applying the principles of verbal and nonverbal communication	Values the therapeutic use of self in patient care  Appreciates the influences of physiological, psychosocial, developmental, spiritual, and cultural influences on one's own ability to communicate	Establishes rapport with clients  Actively listens to comments, concerns, and questions  Demonstrates effective interviewing technique
Interprets differences in communication styles among patients and families, midwives, and other members of the health team	Values the role of each member of the health care team	Communicates effectively with colleagues
Discusses effective strategies for communicating and resolving conflict	Recognizes that each individual involved in a conflict has accountability for it and should work to resolve it	Contributes to resolution of conflict
Understands the principles of group process and negotiation	Appreciates the contributions of others in helping patient and families achieve health goals	Uses standardized communication approach to transfer care responsibilities to other professionals whenever patients experience transitions in care and across settings

## Semester I

Knowledge	Attitude/Behavior	Skills
Understands the influences of different learning styles on the education of patients and families	Values different means of communication used by patients and families	Assesses factors that influence the patient's and family's ability to learn, including readiness to learn, preferences for learning style, and levels of health literacy
Identifies differences in auditory, visual, and tactile learning styles	Accepts the role and responsibility for providing health education to patients and families	Incorporates facts, values, and skills into teaching plan

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### Teaching/Learning Strategies:

- Classroom lectures
- Group exercises
- Educational games
- Demonstration
- Coaching
- Interpersonal presentation
- Homework and laboratory assignments
- Dictionary usage
- Online materials

### Course Expectations:

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

### Required Textbooks:

*The Mayfield Handbook of Technical and Scientific Writing.*

*Building Vocabulary Skills*, Carole Mohr.

Martin Hewings, 2008. *Advanced Grammar in Use*; Cambridge University

Rodney Huddleston and Geoffrey K. Pullum. 2002. The Cambridge Grammar of the English Language.

**Assessment Criteria – Standard Grading System (modified for English):**

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Basic Math

**Course Credits:**

2

**Placement:**

First year, Semester I

**Duration:**

28 hours classroom

**Introduction/Course Description:**

This course teaches basic mathematical skills which are tailored to the needs of the health professions. This module may be a review for most, but will assist in applying previous competencies to conversions and problem solving. This module will prepare the student for integrating these concepts into Medication Administration covered in fundamental courses.

**Broad Course Objectives:**

Upon completion of this course, the student will be able to correctly use basic mathematical skills.

**Specific Course Objectives:**

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

- Solve different problems of fraction, decimal and percentage by using the four fundamental operations (addition, subtraction, multiplication, division)
- Apply the ratio and proportion methods to solve problems
- Solve problems based on conversions from one system to another
- Solve problems for safe medication administration

**Course Content:**

## Unit 1 | Arithmetic Operations

### 1. INTRODUCTION TO NUMBERING SYSTEMS

### 2. BASIC ROMAN NUMERALS:

- Rules for addition and subtraction of Roman numerals

### 3. USE OF ARABIC NUMERALS

**4. SIMPLE CALCULATIONS:**

- Fractions
- Percentages:
  - Ratios
  - Proportions

**5. DECIMALS:**

- Changing fractions to decimals and vice versa
- Adding, subtracting, multiplying and dividing decimals

**6. METRIC SYSTEM – WEIGHT AND VOLUME/METRIC EQUIVALENTS:**

- Apothecary system
- Household system
- Metric system: units of length
- Linear units of measurement

**7. CONVERSION OF TEMPERATURE FROM CELSIUS (CENTIGRADE) TO FAHRENHEIT AND VICE VERSA**

**8. PLOTTING AND CONSTRUCTING GRAPHS WITH POSITIVE AND NEGATIVE NUMBERS:**

- Conversion graphs
- Covert graphs
- Reading and interpretation of graphs

**Unit 2 | Measurements and Calculations**

**1. COMPUTATION OF MEDIAN, MEAN AND MODE FOR AGES, SEX, HEIGHT, WEIGHT AND DISTANCE**

**2. RADIUS, CIRCUMFERENCE, AREA AND VOLUME: PROBLEMS, MEASUREMENTS AND CALCULATIONS:**

- Calculating perimeter

## Semester I

- Measuring radius:
  - Calculating area of squares, circles, rectangles and triangles
  - Calculating volume of cubes, cylinders, cones, globes and pyramids

### **3. CALCULATIONS OF SIMPLE INTEREST AND COMPOUND INTEREST:**

- Definition of terms:
- Principal
- Rate
- Profit
- Percentage
- Time

## **Unit 3 | CALCULATING DOSAGES**

### **1. COMPUTATION OF DOSAGE:**

- When the dose prescribed is in milligrams and dose available is in grams or vice versa
- When the dose ordered by the physician is larger or smaller than the dose on hand
- When the physician orders a dose in one system and the dose on hand is in another
- When a specific dose is to be given and the label on the bottle reads that a certain amount of the drug is dissolved in a certain amount of solution

### **2. COMPUTING ADULT DOSAGE BY WEIGHT**

### **3. COMPUTING A CHILD'S DOSE FROM A KNOWN ADULT DOSE OF DRUG:**

- Clark's formula
- Formula based on body surface area
- Young's formula

### **4. COMPUTATION PROBLEMS RELATED TO INTRAVENOUS SOLUTIONS:**

- Calculating the rate of flow
- Increasing the rate of flow by a specified percent



**Competencies**

Knowledge	Attitudes/Behavior	Skills
Physical, biological, quantitative and computer sciences	Values liberal learning as a solid foundation for the development of the clinical judgment skills required for the practice of professional midwifery and critical thinking	<p>Develops and uses problem-solving and critical thinking skills</p> <p>Integrates concepts from behavioral, biological, and natural sciences in order to understand self and others</p> <p>Interprets and uses quantitative data</p> <p>Uses the scientific process and scientific data as a basis for developing, implementing, and evaluating midwifery interventions</p> <p>Applies knowledge regarding social, political, economic and historical issues to the analysis of societal and professional problems</p>

**Teaching/Learning Strategies:**

- Classroom presentations
- Group exercises
- Educational games
- Demonstration
- Coaching
- Homework and laboratory assignments

**Course Expectations:**

The student is expected to:

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

## Semester I

### References:

William Clarke, 2008. Applied Basic Mathematics; 08ed, Addison Wesley Longman

Elias Zakon, 2001-2012. Basic concept of Mathematics, University of Windsor, Trilla Group.

*Dosage Calculations Made Incredibly Easy*, Lippincott.

### Assessment Criteria – Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Integrated Basic Sciences

**Credits:**

3

**Placement:**

First year, semester 1

**Duration:**

16 weeks

42 hours classroom

42 hours laboratory

**Pre-requisites:**

None

**Introduction/Course Description:**

This course focuses on the scientific principles and concepts from Physics, Chemistry, Biology and Microbiology and their applications to midwifery practice. It also includes a lab component.

**Broad Course Objectives:**

- Describe the basic and applied concepts of Physics, Chemistry, Biology and Microbiology
- Relate the relevant principles of Physics, Chemistry, Biology and Microbiology while providing midwifery care to patients
- Discuss the relevant principles of Physics, Chemistry, Biology, and Microbiology as applied in the hospital and community environment
- Demonstrate the application of the concepts of applied science through laboratory experiments
- Interpret lab values
- Classify microorganisms as they relate to infection control

**Course Content:****Unit I****1. INTRODUCTION TO APPLIED SCIENCE:**

- Application of physics, chemistry, biology and microbiology
- Importance of science to practice

## Semester I

### 2. REVIEW OF BASIC SCIENCE:

- Matter and elements, mixtures and compounds
- Language of chemistry (chemical reactions and formulas; periodic table)
- Laws of motion
- Work, power and energy (simple machines)

### 3. BIOLOGY:

- Basic design of a cell:
- Nucleus
- Cytoplasm
- Organelles – mitochondria, etc.

### 4. DEFINITION AND DESCRIPTION OF THE FOLLOWING:

- Mitosis
- Meiosis
- Cell membrane
- Cellular respiration
- Metabolism

### 5. MICROBIOLOGY

### 6. DESCRIPTION AND USES OF MICROSCOPIC:

- Parts of a microscope
- Uses of a microscope (lab)

### 7. PROPER HANDLING OF MICROSCOPE FOR PROCEDURES (LAB):

- Care and storage of a microscope

### 8. CHARACTERISTICS OF MICROORGANISMS:

- Structure
- Growth requirements
- Pathogenicity

**9. CLASSIFY MICROORGANISMS (LAB):**

- Protozoa
- Algae
- Fungi
- Bacteria
- Viruses

**10. MICROBIOLOGY IN EVERYDAY LIFE:**

- Malaria parasites
- AFB (TB-leprosy)
- Gram negative-gram positive (lab)

**11. SPECIMEN COLLECTION OF:**

- Blood
- Sputum
- Stools
- Urine
- Skin scrapings
- Slide preparation (lab)

**12. INFECTION AND DISEASE TRANSMISSION:**

- Pathogens and infectious disease
- Spread of infectious diseases
- Primary and secondary infections
- Disease Transmission:
  - Direct
  - Indirect

**13. BODY RESPONSES TO MICROORGANISMS:**

- Immunity:
  - Active
  - Passive
  - Infections

**14. CONTROL OF MICROORGANISMS:**

- Sterilization
- Physical and chemical methods
- Vaccines

**15. CHEMISTRY**

**16. MOLECULAR PHENOMENA RELATED TO BIOLOGICAL PROCESSES:**

- Composition of body fluids:
  - Water and electrolytes
  - Fluid Compartments
  - Intra-cellular
- Extra-cellular:
  - Interstitial fluid
  - Intravascular fluid

**17. MOVEMENT OF FLUIDS AND PARTICLES:**

- Diffusion
- Osmosis
- Osmotic pressure
- Result of fluid introduction:
  - Isotonic fluid
  - Hypotonic fluid
  - Hypertonic fluid
  - Fluid-electrolyte balance

- Plasma proteins and their functions

### **18. FACTORS FOR MAINTENANCE OF ACID-BASE BALANCE:**

- PH (lab)
- Buffer systems
- Role of respiratory system in maintaining pH homeostasis:
  - Potential problems – Respiratory acidosis and alkalosis
- Role of kidneys in maintaining pH homeostasis:
  - Potential problems – Metabolic acidosis and alkalosis
- Cause of fluid imbalance:
  - Burns
  - Vomiting
  - Diarrhea
  - Edema

## **Unit II | Physics**

- Friction and Heat Specific and latent
- Temperature versus heat
- Converting Celsius to Fahrenheit and back
- Conduction
- Convection
- Radiation

### **1. ELECTRICITY:**

- Terms and descriptions
- Conductors and insulators
- Static electricity
- Safe electrical environments
- Safety factors for electrical equipment

## **Semester I**

### **2. ELASTICITY:**

- Tension
- Compression
- Bending

### **3. SOUND:**

- Half length
- Pitch
- Loudness
- Quality
- Beats
- Resonance
- Ultrasound

### **4. LIGHT:**

- Luminosity and illumination
- Reflection and refraction
- Vision and color



# Integrated Basic Sciences Clinical Description

This clinical component of this course provides the learner an opportunity to carry out direct observation and hands on activities in biology, physics, microbiology and chemistry in a basic science laboratory classroom. The learner is also expected to develop relevant knowledge and skills in knowing how a microscope is used in finding evidence based information in the diagnosis and treatment of patients. The practicum allows for collaboration and consultations with the instructor and members of the class.

## Clinical Objectives

- At the end of this course, the learner will be able to: Demonstrate basic procedures of the integrated basic sciences in client care
- Interpret lab values
- Classify microorganisms as they relate to infection control

## Clinical Placement

- Biology skills laboratory

## Clinical Skills

- Identifying microorganisms and parasites
- Documentation of findings

## Resources/Materials

- Tourniquets
- Lab Coats
- Gloves
- Microscopes and slides
- Petri dish
- Reagents

## Competencies

Knowledge	Attitude/Behavior	Skills
Physical, biological, quantitative and computer sciences	Values liberal learning as a solid foundation for the development of the clinical judgment skills required for the practice of professional midwifery and critical thinking	Integrates concepts from behavioral, biological, and natural sciences in order to understand self and others

## Semester I

### Teaching and Learning Strategies:

- Lectures/discussions
- Group work
- Case study
- Self-directed learning
- Reflective diaries

### Practical/Clinical Assessment:

- Clinical Logs
- Clinical Practicum
- OSCE
- Case Presentations

### Assessment/Evaluation:

- Written Examinations
- Quizzes

### References:

*Integrated Science*, 3rd Ed., McGraw-Hill Higher Education, 2007.

Sylvia Mader, 2011. *Human Biology*: 12th edition, McGraw-Hill Companies, Inc.

John A. Olmsted, 2008. *Chemistry* 4th edition

David Halliday, 2004. *Fundamentals of Physics*, 7th edition

# Course Title: Anatomy and Physiology I

**Credits:**

3

**Placement:**

First year, Semester I

**Duration:**

42 classroom hours

42 lab hours

**Course Description:**

This course equips the learner with normal anatomy and physiology of all systems of the human body. The knowledge gained in this course will be used in Anatomy and Physiology II and all subsequent midwifery courses.

**Broad Objectives:**

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

- Know the names, functions and locations of basic organs and systems of the body
- Identify and describe the locations and functions of organs within the body
- Be able to describe appropriate anatomical and clinical findings on the medical records

**Specific Objectives:**

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

- Define related anatomical terms, including: anatomy, physiology, gross anatomy and microscopic anatomy
- Name the anatomical parts of the human body
- Explain the physiology connected with these organs (how each organ functions)
- Explain the basic concept of life in relation to the cell, tissue, organ, system anorganism
- Draw a human cell and label all the parts with their physiological descriptions
- Chronologically describe cell development from the time of fertilization to how cells divide and multiply to form tissues, organs and finally systems
- Identify and classify all of the body systems in relation to the organization of the human body
- Explain the purpose of each system

## **Semester I**

- Describe the functions of each system
- List the main components of each system
- Explain the essential functions of each organ of each system
- State the important composition of each organ of each system

### **Course Content:**

#### **1. INTRODUCTION/OVERVIEW:**

- Anatomical terms
- Primary divisions of the body

#### **2. CELLS – THE BASIC UNIT OF ALL LIVING ORGANISMS:**

- Life, cells and body systems
- Cell functions
- Cell components
- Cell division:
  - Mitosis
  - Meiosis

#### **3. CIRCULATORY SYSTEM – ORGANS AND FUNCTIONS:**

- Heart:
  - Walls, chambers and valves
  - Blood vessels
  - Blood components
- Normal circulatory flow
- Systemic and pulmonary circuits and function of each:
  - Systemic (body) circulation: LA, LV, aorta, arteries, arterioles, capillaries, veins, vena cava, right atrium
  - Pulmonary circulation: RA, RV, pulmonary artery, lung capillaries, pulmonary veins, LA
- Body fluids and electrolytes:

- The three compartments
- Fluid composition of each:
  - Fluid buffering systems, fluid pH
  - Homeostasis
- Blood pressure
- 4. SKELETAL SYSTEM:**
  - Names of bones and joints
  - Types of bones and composition of each
  - Functions and purposes
  - Types of movements of joints
- 5. MUSCULAR SYSTEM:**
  - Types and names of muscles
  - Components of muscle cells
  - Muscular functions
  - Purpose, movement
- 6. RESPIRATORY SYSTEM:**
  - Organs, Structures and Functions:
    - Nose
    - Pharynx
    - Larynx
    - Trachea
    - Lungs with bronchial tubes, bronchioles and alveoli
  - Importance
  - Functions of each component
  - Air composition
  - Mechanics of respiration
  - Gaseous exchange of oxygen and carbon dioxide:

## Semester I

- Alveolar level in lungs
- Cellular level

### 7. LYMPHATIC SYSTEM AND BODY FLUIDS:

- Lymph nodes:
  - Definition and locations
  - Structure
  - Functions of nodes
- Lymphatic fluid:
  - Composition, etc.
- Fluids and electrolytes, and fluid compartments of the body:
  - The three compartments
  - Fluid composition of each (different electrolytes and their concentrations)
  - Fluid buffering systems, fluid pH
  - Homeostasis
  - When homeostasis fails:
    - Respiratory acidosis and alkalosis
    - Metabolic acidosis and alkalosis
  - Osmotic pressure
  - Distribution of fluids
  - Importance and functions

### 8. URINARY SYSTEM – ORGANS AND FUNCTIONS OF EACH:

- Kidneys
- Ureters
- Bladder
- Urethra
- Composition of urine
- Excretion of wastes: urea is main waste
- Homeostasis (pH): metabolic acidosis and alkalosis

- Homeostatic water balance under control of ADH from posterior pituitary

## 9. NERVOUS SYSTEM – ORGANS AND FUNCTION:

- Neurons: 100 billion in brain. Each neuron has a body, axon and dendrites, and neurons communicate with each other. (If a person were to lose one brain cell each second it would take 3170 years to lose all 100 billion.)
- Neurotransmitters – excitatory and inhibitory-perhaps 50+ transmitters:
  - Made at the end of each axon
  - Released into synaptic space
  - Neurotransmitter attaches to receptor in end of dendrite and causes impulse, then taken back in (reuptake) to end of axon
  - Main examples (many others):
    - Acetylcholine, especially in cholinergic division of autonomic nervous system
    - Serotonin:
      - Regulates mood (depression), appetite, sleep, memory, learning, temp, behavior, muscle contraction and functions of cardiovascular and endocrine systems
      - Selective serotonin reuptake inhibitors (SSRI's) given for depression
    - Norepinephrine also regulates mood
- Brain (brain and spinal cord make up the central nervous system):
  - Brainstem:
    - Medulla oblongata – vital functions: breathing, blood pressure, heart rate, digestion. Pathway of all nerve impulses (both sensory and motor) between the brain and spinal cord.
    - Pons – relay center: connects the medulla oblongata to the diencephalon, cerebrum and cerebellum. Contains motor and sensory pathways. Helps regulate breathing.
  - **Cerebellum:** controls balance, movement, coordination and proprioception
  - **Diencephalon:** Thalamus and Hypothalamus:
    - Processes and relays sensory information to cortex
    - Motor control functions
    - Autonomic functions
  - **Cerebrum:** Cortex (grey matter – thinner surface layer) and white matter (deeper). Cell bodies are in the grey matter:

## Semester I

- 2 hemispheres: each controls opposite side of body. Left usually dominant (especially if right-handed).
- Hemispheres connected by the **Corpus Callosum**: permits right and left hemisphere to communicate with each other
- **Four lobes** of cerebrum – location and functions of each:
  - Anterior lobe: in front
  - Planning, problem-solving, conscience, impulse-control, memory, decision-making, organizing
  - Posterior part of anterior lobe contains the neurons which cause muscles to move (motor strip)
  - Left frontal lobe also plays a part in speech and language
  - **Parietal lobe**: behind anterior lobe, but in front of posterior:
    - Integrates sensory information
    - Part just posterior to anterior lobe is the sensory strip, which detects sensations (touch, pain, heat, coldness) and tells us which part of the body sensations are coming from
    - Tells us which way is up
  - **Occipital or Posterior lobe (visual cortex)** (in very back of cerebrum): we see with the back of our brain
  - **Temporal lobe** – lower lateral cerebrum-left usually dominant. Center for:
    - Hearing
    - Recognizing speech
    - Speaking
    - Has some part in memory
- **Ventricles**: choroid plexuses in ventricles 1 and 2 produce spinal fluid
- **Meninges**: lining around the brain and spinal cord-protect and cushion the brain and cord
- **Blood-brain barrier**: prevents many toxins and medicines in blood from reaching the brain
- Cranial nerves: I–XII
- Spinal cord:
  - Carries messages between brain and arms, legs and body:
    - Efferent fibers – front of cord – motor fibers: carry messages from brain downward to arms, legs and body
    - Afferent fibers – back of cord – sensory fibers: carry sensations up to brain



- Cord protected by vertebra
- Spinal fluid
- Peripheral nerves
- Autonomic nervous system – nerves and function

**10. ENDOCRINE SYSTEM – ANATOMY OF GLANDS AND FUNCTIONS OF EACH HORMONE(S) PRODUCED BY EACH GLAND AND FUNCTION OF HORMONE(S):**

- Pituitary – The Master Gland:
  - Anterior: ACTH, GH, FSH, LTH (prolactin), LH, TSH (and endorphins)
  - Posterior: ADH, Pitocin
- Pineal: Melatonin
- Thyroid: thyroxine, tri-iodothyronine
- Parathyroid (four glands): parathormone
- Pancreas – discuss its endocrine functions (point out also has exocrine functions):
  - Isles of Langerhans
  - Alpha, beta and delta cells: glucagon, insulin, and somatostatin respectively
- Adrenal:
  - Medullary hormones: epinephrine and norepinephrine
  - Cortical hormones: cortisol, aldosterone, androgens
- Gastric and intestinal hormones: incretin
- Gonads:
  - Ovaries: estrogen, progesterone
  - Testicles: testosterone

**11. REPRODUCTIVE SYSTEM – ORGANS AND FUNCTION OF:**

- Female:
  - Ovaries and menstrual cycle
  - Fallopian tubes
  - Uterus
  - Vagina

## **Semester I**

- Male:
  - Testes and spermatogenesis
  - Vas deferens
  - Prostate
  - Penis

### **12. INTEGUMENTARY SYSTEM:**

- Function of skin
- Layers of skin:
  - Epidermis
  - Dermis
  - Connective tissue
- Function of sweat
- Function of skin oils
- Appendages:
  - Purpose of hair
  - Purpose of nails

### **13. GASTROINTESTINAL SYSTEM:**

- Organs, Structures and Functions:
  - Mouth
  - Pharynx
  - Esophagus
  - Stomach
  - Duodenum
  - Small and large intestines
  - Liver
- Glands/organs supplying the system:
  - Salivary
  - Pancreas

- Intestinal wall glands
- Physiological function of each organ of the system
- Digestive juices and enzymes
- Absorption
- Elimination of wastes

Organ	Digestive Juice	Enzyme or Substance	Action
Mouth	Saliva	Amylase	Starch to sugar
Stomach	Gastric juice	Hydrochloric acid Rennin Pepsin (protease) Lipase	Softens and breaks up food Digests milk protein Proteins to peptides Digests fats
Liver	Bile		Emulsifies fats (small particles of fat more easily absorbed)
Pancreas	Pancreatic juice	Trypsin (protease) Lipase Amylase	Proteins to peptides Digests fats Starches to sugars
Small intestine	Intestinal juice	Saccharidases Lipase Peptidase	Complex sugars to monosaccharides Digests fats Peptides to amino acids

#### 14. RADIOLOGIC HEALTH – EFFECTS OF RADIATION ON HUMAN PHYSIOLOGY:

- Nature of radiation
- Types of radiation
- Natural and artificial detection and measurements of radiation
- Radiation protection
- Biological effects
- Medical uses of radiation
- Disciplines within radiology

# Anatomy and Physiology Clinical Description

## **Clinical Description:**

The clinical component of the course provides the learner with an opportunity to enhance basic assessment skills of the structure and function of the organs of the human body. The learner has the opportunity to carry out direct observation on simulators and models in the midwifery arts laboratory to develop relevant knowledge and skills about how the human body works. The practicum allows for collaboration and consultations with the instructor and members of the class.

## **Clinical Objectives:**

At the end of this course, the learner will be able to:

- Identify various body systems and organs using anatomic models
- Participate in the process of assessing factors which directly and indirectly affect an individual's health
- Assesses own strengths and weakness in the implementation of the midwifery profession
- Collaborate with instructors and members of the class.

## **Clinical Placement:**

- Clinical skills laboratory

## **Clinical Skills:**

- Identifying body parts
- Listing functions
- Documentation of findings

## **Resources/Materials:**

- Anatomical models
- Lab Coats
- Gloves
- Microscopes

**Competencies**

Knowledge	Attitude/Behavior	Skills
Understands the Anatomy and physiology of the human body for own midwifery practice	Appreciates the importance of anatomy and physiology to own midwifery practice	Applies knowledge of anatomy and physiology in physical assessment of clients for midwifery care
Describes the structure of the human body	Recognizes that the human body originates from a cell	Demonstrates ability to assess and examine the client correctly
Describes the functions, regulatory mechanisms and interaction of body systems.	Values the body structures and their functions	Demonstrates ability to draw body parts including systems.

**Teaching and Learning Strategies:**

- Lectures/discussions
- Group work
- Demonstrations
- Case study
- Self-directed learning
- Reflective diaries
- Simulations

**Practical/Clinical Assessment:**

- Clinical Logs
- Clinical Practicum
- OSCE
- Case Presentations

**Instructional Materials:***Textbooks:*

Vogl and Adam W.M. Mitchell, 2009. *Gray's anatomy for students*

Gerard J. Tortora & Bryan H. Derrickson. 2011. *Principles of Anatomy and Physiology*

Frank H. Netter, MD., 2010. *Atlas of Human Anatomy, Professional Edition, 5th ed.*

Frederic H. Martini, Ph.D., *Fundamentals of Anatomy and Physiology*

Van De Graff/Fox. *Concept of Human Anatomy and Physiology, 3rd Ed.*, Marieb and Kollett

## Semester I

### Human Anatomy and Physiology Laboratory Manual, Instructors Guide

- Anatomic charts
- Anatomic models
- Skeleton

#### **Course Expectations:**

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

#### **Assessment Criteria – Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Microbiology

**Credits:**

3

**Placement:**

First year, Semester I

**Duration:**

60 classroom hours

**Course Description:**

This course is designed to assist the learner in acquiring knowledge of the names, structure, mode of living, effects and control of various microorganisms that affect the health of individuals within their internal and external environment. Emphasis will be placed on common pathogenic microorganisms in West Africa with particular reference to Liberia. Laboratory experiments will enable the learner to apply the principles of microbiology.

**Broad Course Objectives:**

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

- Understand the evolution of microbiology
- Use a simple light microscope for examination of microorganisms
- Understand bacterial morphology and physiology
- Understand the system of classifying microorganisms of medical importance, with the diseases which they cause and their general classification
- Utilize the knowledge of characteristics of microorganisms including parasites to prevent infections, and promote and maintain the health of self and others

**Specific Objectives:**

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

- Correctly identify parasites under the light microscope
- Correctly discuss the role of the immune system in the pathogenesis of diseases
- Describe general diagnostic methods as applied in microbiology
- Describe various recent advances in diagnostic medical microbiology in the modern health care system
- Make gram-stained slides to identify the type of bacteria present

**Course Content:**

## **Unit 1 | Evolution of Microbiology**

### **1. DESCRIBE BRANCHES OF MICROBIOLOGY, GIVE EXAMPLES:**

- Bacteriology
- Virology
- Mycology
- Parasitology

### **2. WITCHCRAFT, RELIGION, BREAKING TABOOS AND BAD SPELLS**

### **3. HISTORIC MICROBIOLOGY:**

- List of names and contributions

## **Unit 2 | Microscopy**

### **1. TYPES OF MICROSCOPES (BRIEF DESCRIPTION AND PRINCIPLES):**

- Simple light microscope
- Phase contrast microscope
- Fluorescent microscope
- Dark field (dark ground) microscope
- Electron microscope

### **2. SIMPLE LIGHT MICROSCOPE:**

- Parts and their use

## **Unit 3 | Morphology and Physiology of Prokaryotes and Eukaryotes**

### **1. PROKARYOTES AND EUKARYOTIC CELLS (GIVE EXAMPLES)**

### **2. HUMAN CELL ANATOMY, STRUCTURE AND FUNCTION:**

- Cell membrane
- Nucleus
- Centriole
- Golgi complex



- Endoplasmic reticulum (smooth and rough)
- Mitochondria
- Ribosomes
- Lysosomes

### **3. BACTERIAL ANATOMY – STRUCTURE AND FUNCTIONS:**

- Cell wall
- Cytoplasmic membrane
- Cytoplasm
- Ribosome
- Mesosome
- Intracytoplasmic inclusion
- Nucleus
- Slime layer and capsule
- Flagella
- Fimbriae
- Spore

### **4. BACTERIAL GROWTH:**

- Factors necessary for bacterial growth:
  - Source of energy
  - Moisture
  - pH
  - Nutrients
- Bacterial growth curve:
  - Log phase
  - Log (exponential)
  - Stationary
  - Decline (death)

## Unit 4 | Classification of Microorganisms

### 1. ATMOSPHERIC REQUIREMENT CLASSIFICATION (EXPLAIN AND GIVE EXAMPLES):

- Aerobic
- Anaerobic
- Facultative
- Microaerophilic

### 2. MORPHOLOGICAL CLASSIFICATION AND ARRANGEMENT (GIVE EXAMPLES):

- Cocci
- Bacilli
- Curved bacilli
- Cocco-bacilli
- Spirochetes

### 3. SYSTEM NOMENCLATURE:

- Family
- Genus
- Species

### 4. STAINING REACTION CLASSIFICATION:

- Gram stain principle
- Gram stain procedure
- Gram stain classification:
  - Gram positive
  - Gram negative
- Examples of gram positive cocci:
  - Staphylococcus
  - Streptococcus (pyogenes and pneumococcus)

- Examples of gram positive bacilli:
  - Corynebacteria
  - Bacillus
  - Clostridia
  - Mycobacteria (also acid-fast)
- Examples of gram negative cocci:
  - Neisseria
- Examples of gram negative bacilli:
  - Enterobacteria
  - Vibrionaceae
  - Pseudomonas
  - Parvobacteria
- Ziehl Neelsen staining:
  - Principles
  - Procedure
- Acid-fast staining

## Unit 5 | Microbial and Parasitic Infections

### 1. INFECTIONS:

- Sources, modes and portals of entry
- Predisposing factors
- Attributes of pathogens
- List and describe types of carriers
- Convalescent
- Paradoxical
- Contact

## Unit 6 | Microbial Diseases

- Signs and symptoms
- Specimen collection
- Preservation
- Transportation
- Common pathogens
- Commensal

### 1. RESPIRATORY TRACT INFECTIONS:

- Sputum
- Throat swab

### 2. EAR INFECTIONS: EAR SWAB

### 3. WOUND INFECTIONS: WOUND SWAB

### 4. URINARY TRACT INFECTIONS: MID STREAM URINE (MORNING SPECIMEN-MSSU)

### 5. GASTROINTESTINAL INFECTIONS-STOOL

### 6. CENTRAL NERVOUS SYSTEM INFECTIONS:

- Types of CNS infections (bacterial, viral, parasitic, fungal, mycobacterial)
- CSF
- Septicemia
- Cultures: blood and CSF

### 7. SEXUALLY TRANSMITTED DISEASES – SIGNS, SYMPTOMS AND TREATMENT:

- Viral:
  - HIV
  - Warts (complication: warts can cause cervical and vulvar cancer)
  - Herpes

- Bacterial:
  - Gonococci
  - Chlamydia
  - Spirochetes:
    - Syphilis
- Fungal:
  - Candidiasis
- Parasitic:
  - Trichomonas

## **Unit 7 | Brief Description, General Properties, Diseases Caused and Prevention of Other Medically Important Species**

### **1. SPIROCHETES:**

- Borrelia
- Leptospira

### **2. RICKETTSIAE**

### **3. FUNGI:**

- Characteristics of fungi (differences)
- Mycoses
- Superficial
- Subcutaneous
- Deep/systemic
- Treatment

### **4. PARASITES – DISEASES, PREVENTION AND LIFE CYCLES:**

- Protozoa: entamoeba
- Sporozoa: plasmodium

## Semester I

- Mastigophora – giardia lamblia:
  - Trypanosoma (sleeping sickness: T. gambiensa in West Africa)
- Cestodes: taenia saginata
- Trematodes:
  - Schistosoma haematobium
  - Schistosoma mansoni
- Nematodes:
  - Intestinal:
    - Enterobius vermicularis:
    - Trichuris trichura
    - Ascaris lumbricoides
    - Ancylostoma duodenale
    - Strongyloides stercoralis
  - Systemic: W. banrofti
  - Subcutaneous: Onchocerca volvulus

## Unit 8 | Basic Theoretical Aspects of Immunity

1. ANTIGEN ANTIBODY REACTIONS
2. NON-SPECIFIC IMMUNITY
3. SPECIFIC IMMUNITY
4. FACTORS AFFECTING IMMUNE SYSTEM
5. TYPES OF IMMUNITY
6. DISORDERS OF IMMUNITY

## Unit 9 | Prevention and Control of Infections

1. PRINCIPLES
2. LEVELS OF CONTROL:
  - Primary

- Secondary
- Tertiary

### **3. UNIVERSAL PRECAUTIONS FOR PREVENTION**

## **Unit 10 | Sterilization and Disinfection/Antiseptic**

### **1. DEFINITIONS**

### **2. GENERAL USES**

### **3. TYPES OF HEAT USED:**

- Physical:
  - Dry heat-hot air oven, flame
  - Moist heat-autoclave, tyndallization, pasteurization
  - Filtration
  - Radiation
- Chemical and gaseous disinfectants:
  - Bleach (Lysol): sodium hypochlorite solution – releases chlorine
  - Formaldehyde
  - Ethylene oxide

### **4. ANTISEPTICS:**

- Alcohol
- Iodine (povidone)
- Boric acid
- Chlorhexidine 0.05% solution

## **Unit 11 | Culture/Transport Media**

### **1. COMMON INGREDIENTS**

### **2. CULTURE METHODS**

**Semester I**

**3. CULTURE AND SENSITIVITY TESTS:**

- Bacterial cultures and media:
  - Nutrient agar
  - MacConkey agar
  - Blood agar
  - Nutrient broth
  - Simple colony morphology
- Antibiotic sensitivity test:
  - Purpose of modified Kirby-Bauer disc diffusion test
  - Antibiotic resistance

**4. RECENT ADVANCES IN MICROBIOLOGY:**

- Description of PCR
- Purpose of PCR

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**Teaching/Learning Strategies:**

- Lectures/discussions
- PowerPoint
- Demonstrations
- Laboratory

**Course Expectations:**

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates



**References:**

*Introduction to Medical Laboratory Technology*, 5th Ed., Monica Cheesebrough, 1976.

*Practical Medical Microbiology*, 14th Ed., Mickie and McCartney, 1996. *Medical Microbiology*, 2nd Ed., Murray, Kobayashi, Pfaller, Rosenthal, 1990. *Clinical and Pathogenic Microbiology*, 2nd Ed., Barbara J.Howard, 1994.

*Basic Clinical Parasitology Practice*, 5th Ed., Harold W. Brown and Franklin A. Neva

**Course Evaluation:**

**Assessment Criteria – Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Chemistry

**Credits:**

3

**Level:**

First year, Semester I

**Duration:**

60 classroom hours

**Course Description:**

This course provides an insight to the fundamental concepts, principles, laws and theories in general, organic and biochemistry. The knowledge gained will serve as a foundation for better understanding and assimilation of more complex chemical concepts and reactions.

**General Course Objectives:**

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

- Demonstrate the knowledge of the concepts and principles of general inorganic chemistry
- Relate the characteristics of organic functional groups to their structure
- Relate functions of carbohydrates, lipids and proteins to their structure

**Specific Course Objectives**

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

- Define a compound, element and ion
- State the number of electrons filling each ring or shell in the first four periods of the Periodic Chart of the Atoms
- Describe how the group (or position) in the first 3 rings of the Periodic Chart determines the valence of the element
- Correctly write the formula for an element in group 2 combining with an element in group 7 (in the first 4 periods)
- Define metals and non-metals
- Define pH
- State what determines if a substance is an acid
- Define ionic bonding

- Describe covalent bonding
- Describe how the chemistry of carbon is related in the chemistry of living things
- Define carbohydrates, lipids, and amino acids

**Course Content:****Unit 1 | Inorganic Chemistry****1. STATES AND PROPERTIES OF MATTER:**

- Definition of matter
- Describe states of matter with examples: solids, liquids and gasses
- Discuss physical and chemical properties of matter
- Define elements, compounds and mixtures
- Describe kinds of matter with examples: elements, compounds and mixtures
- Describe the properties of metals and non-metals
- Define physical change and chemical change
- Describe the types of chemical reactions with examples: combination, replacement, decomposition and double displacement
- Explain different separation methods of mixtures: filtration, distillation, fractional, sedimentation, extraction, gravitation and chromatography
- Describe some special properties of matter: absorption, adsorption (with examples from the body)

**2. THE STRUCTURE OF MATTER AND THE PERIODIC TABLE:**

- Define atom, molecule and ion
- Describe the structure of atom with examples: protons, electrons and neutrons
- Define atomic number, mass number and atomic mass
- Describe the rules of the electronic distribution in an atom
- Explain the electronic distribution of some commonly used elements: hydrogen oxygen, sodium, calcium, phosphorus, chlorine, etc.
- List a few examples of physiologically important ions
- Discuss isotopes by using different examples

## Semester I

- Give a brief description of the periodic table: introduction, groups and periods
- Describe the arrangement of the elements in the periodic table
- Describe metallic and non-metallic nature of the elements in the periodic table
- Describe the reactivity trend of group I elements and group VII elements
- Describe transition elements
- State the properties of transition elements

### 3. CHEMICAL BONDING:

- Define valency, chemical bond
- Discuss why atoms bond
- Give the electrons: dot structures of some common atoms
- Describe different types of bonding with examples: ionic, covalent and metallic
- Compare the properties of ionic compounds with covalent-bonded compounds
- Discuss the medical importance of some common ionic and covalent compounds examples: sodium chloride, magnesium hydroxide, magnesium sulphate, potassium permanganate, aluminum hydroxide, barium sulphate, chloroform, ethanol, acetone, formaldehyde, etc.
- Briefly explain polar and non-polar covalent bonds with examples such as  $\text{Cl}_2$ ,  $\text{H}_2\text{O}$ ,  $\text{CCl}_4$ , etc.
- Define oxidation number
- List the rules of assigning oxidation numbers for covalent compounds
- Calculate the oxidation number of an element from formulas
- Write the formula from oxidation numbers

### 4. CHEMICAL REACTIONS AND EQUATIONS:

- Define symbol, formula and equation with examples
- Write and balance simple chemical equations
- Define relation of chemical reaction, reversible reaction, chemical equilibrium, law of mass action, Le Chatlier's principle and equilibrium constant

- Explain the factors affecting the rate of chemical reaction, nature of reacting substances, temperature, concentration, catalyst (positive and negative catalyst) and surface area
- Discuss the practical application of the above mentioned factors
- Discuss the examples of reversible reaction: hydrolysis esters and hydrolysis of protein
- Discuss the effect of concentration, temperature and catalyst on equilibrium

#### 5. ENERGY CHANGES:

- Define exothermic reaction and endothermic reaction
- Describe the meaning of exothermic ( $\Delta H$  negative) and endothermic ( $\Delta H$  positive) reactions in bond forming and bond breaking, example: burning of fuels (wood, coal– exothermic); radioactive isotopes such as  $^{255}\text{U}$  as a source of nuclear energy; photosynthesis as the reaction between carbon dioxide and water in the presence of chlorophyll; and using sunlight (energy) to produce glucose

#### 6. RADIOACTIVITY:

- Define radioactivity, natural radioactivity and artificial radioactivity
- Give examples of radioactive atoms
- State different types of radiation and discuss their properties – alpha, beta and gamma
- Define nuclear reaction
- Write equations for nuclear reaction by using symbols
- Discuss the units of radiation
- List a few radioisotopes used in medicine and their medical uses
- Discuss half-life by giving different examples
- Discuss sources of radiation
- List the biological effects of radiation
- List the precautions to be taken to minimize the biological hazards of radiation
- Discuss the safeguards in handling radioactive substances

#### 7. OXYGEN, CARBON DIOXIDE AND WATER:

- Give the occurrence of oxygen

## Semester I

- Discuss the physical and chemical properties of oxygen
- Explain the different types of oxides: acidic oxides, basic oxides, amphoteric oxides and neutral oxides
- Discuss some of the physiologically important oxides: carbon monoxide; sulphur dioxides and nitrous oxide
- List the medical uses of oxygen
- Describe the safety measures to be taken when oxygen is in use
- Define oxidation and reduction (in terms of oxygen, hydrogen, gain/loss, electron transfer and changes in oxidation state)
- Identify redox reactions in terms of hydrogen/oxygen and/or electron and gain/loss
- Define oxidizing agent and reducing agent
- Identify oxidizing and reducing agents in the equation
- Discuss oxidation-reduction reaction taking place in the body, example: carbohydrate
- Discuss the importance of oxidation-reduction: antiseptic action, stain removal and bleaching action
- List some medically important oxidizing and reducing agents and their importance
- Discuss the physical and chemical properties of carbon dioxide
- State the medical uses of carbon dioxide
- Discuss the safety precautions to be followed during the administration of carbon dioxide
- List some of the medically important carbonates and bicarbonates and their uses, examples: calcium carbonate, magnesium carbonate, calcium bicarbonate and sodium bicarbonate
- Discuss the importance of water with emphasis on physiological aspect of water
- Describe the physical and chemical properties of water
- Discuss the structure of water molecule
- Define hydrates, anhydrous, hygroscopic and efflorescent
- Discuss the impurities present in water

- Explain the purification methods: boiling, distillation, sedimentation, filtration chlorination, aeration and deionization
- Define soft and hard water, and discuss reasons for temporary and permanent hardness
- Explain different methods for the removal of hardness: boiling, addition of ammonium hydroxide, addition of sodium carbonate and zeolite method
- Discuss fluoridation of water
- Define “polluted water”
- Classify water pollutants
- State the total body water content and the reasons for variation of the water content: age, individual differences and sex
- Discuss water intake and loss, example: condition, such as kidney function
- Discuss edema and dehydration

#### **8. IONIZATION:**

- Discuss the theory of ionization
- Define: electrolyte, non-electrolyte, cation and anion
- Explain the conductivity of solutions
- Discuss the effect of electrolytes on boiling point and freezing point
- Explain the ionization of water
- Discuss the importance of ions in body chemistry
- List some physiologically important ions and their functions

#### **9. CHEMICAL STOICHIOMETRY:**

- Define: atomic weight, molecular weight, equivalent weight, relative atomic mass, relative molecular mass, mole, Avogadro’s number, molarity, normality, molality and standard solution
- Describe the methods to calculate molarity, normality, percentage composition, number of moles in a given mass of substance and amount of reactant or product from a given equation
- Discuss the preparation of standard solution
- Explain the titration of an acid with base

## **10. LIQUID MIXTURES – SOLUTIONS, SUSPENSIONS, COLLOIDS AND EMULSIONS:**

- Define solution, solute, solvent, suspension and colloid emulsion
- List and compare the general properties of solution, suspension, colloids and emulsions
- Discuss dilute solution, concentrated solution, saturated solution, unsaturated solution, super saturated solution, isotonic solution, hypotonic solution and hypertonic solution
- State the importance of solutions
- Define solubility; discuss the factors affecting solubility, nature of solute and solvent, temperature and pressure
- Describe the special properties of solutions, osmosis, osmotic pressure, osmolarity, diffusion, surface tension (cohesion and adhesion), capillarity and viscosity
- Explain how the above mentioned properties are related physiologically
- Discuss the clinical importance of a nebulizer and the precautions to be taken in its use
- Define: adsorption, Tyndall effect and Brownian movement
- Discuss the application of adsorption property to medication and electrical change of colloids to antidotes
- Discuss the types of colloidal dispersions, sols and gels, dialysis and hemodialysis
- Discuss the function of an artificial kidney machine in dialysis
- Distinguish between temporary and permanent emulsion

## **11. ACIDS, BASES AND SALTS:**

- Define acids, bases and salts with examples
- Discuss acids as proton donor, bases as proton acceptor
- Describe the properties of acids and bases
- List some medically important acids and bases and their uses
- Define pH
- Describe the pH scale to show acidity/alkalinity
- Explain different methods to measure pH, pH meter, universal indicator and lab stick



- Describe the safety precautions in handling and storing acids, bases and other chemicals
- State the types of salts
- Discuss the solubility of common salts
- Explain the chemical reaction of salts hydrolysis with metals and other salts, and with acids and bases
- List some medically important salts and their uses

## **12. BUFFER SOLUTIONS:**

- Define buffer solution
- List different buffers in the body, bicarbonate buffers and protein buffers
- Define and discuss acidosis (metabolic) and alkalosis (metabolic)
- Explain what a buffer solution consists of and how it works

## **Unit 2 | Organic Chemistry**

### **1. INTRODUCTION:**

- Define organic chemistry
- Discuss the uniqueness of carbon compounds
- List examples of organic compounds
- Discuss the importance of structural formula for organic compounds in comparison with molecular formula
- Describe the bonding in organic compounds:
  - Single bonds
  - Double bonds
  - Triple bonds
- Explain the classification of organic compounds:
  - Broad classification
  - Fine classification
- Discuss broad classification as open chain and cyclic compounds with examples

## Semester I

- Open chain compounds (aliphatic compounds) as saturated and unsaturated compounds with examples and cyclic compounds as carboxylic or homocyclic i.e., aromatic and alicyclic and heterocyclic with examples
- Define “functional group”
- List different functional groups with examples:
  - Alcohols
  - Aldehydes
  - Ketones (carbonyl)
  - Ethers
  - Esters
  - Carboxylic acids
  - Amines
  - Amides
  - Amino acids
- Define Isomerism
- Define “homologous series” and state the properties of homologous series of alkenes
- Discuss structural formula
- Discuss IUPAC nomenclature
- Describe the rules followed in naming alkenes by using different examples

## 2. HYDROCARBONS:

- Define hydrocarbons
- Classify hydrocarbons:
  - Saturated (alkanes)
  - Unsaturated (alkenes, alkynes)
- State the general formula for alkanes, alkenes and alkynes
- State the important source of hydrocarbons

- Describe the physical and chemical properties of saturated and unsaturated hydrocarbons:
  - Combustion
  - Substitution
  - Addition
  - Polymerization
- List some natural and artificial polymers
- State the medical uses of alkanes and alkenes products, ethane, ethene and artificial polymers

### 3. HALO ALKANES:

- Discuss haloalkanes e.g., methyl and ethyl chloride, chloroform, Iodoform, carbon tetrachloride, halothane, enflurane, isoflurane
- Discuss the oxidation of chloroform and precautions to be taken to prevent such reactions

### 4. ALCOHOLS:

- State the general formula, IUPAC and nomenclature of alcohols
- Describe the types of alcohols: monohydric, dihydric, trihydric, primary, secondary and tertiary with examples
- Discuss the physiological effects of alcohols e.g., methanol, ethanol, etc. and the medical importance of some alcohols:
  - Methanol
  - Ethanol
  - Isopropyl alcohol
  - Ethylene glycol
  - Glycerol
  - Menthol

### 5. ETHERS:

- State the general formula for ethers
- Discuss simple and mixed ethers e.g., dimethyl ether, diethyl ether and ethyl menthyl ether

## Semester I

- Discuss the IUPAC nomenclature and the general properties of ethers:
  - Inertness
  - Peroxide formation
- State the precautions to be taken when ethers are kept in the lab
- State important uses of diethyl ether:
  - Solvent
  - Anesthetic

### 6. ALDEHYDES AND KETONES:

- State the general formula for aldehydes and ketones
- List the common examples of aldehydes and ketones
- Discuss the physical and chemical properties of aldehydes and ketones:
  - Oxidation
  - Reduction
  - Reducing action
- State the important medical uses of the following aldehydes and ketones:
  - Formaldehyde
  - Glutaraldehyde
  - Paraldehyde
  - Acetone

### 7. CARBOXYLIC ACIDS:

- State the general formula of carboxylic acid
- Discuss the important properties of carboxylic (physical and chemical) acid:
  - Etherification
  - Acidic reaction (with bases and ammonia)
- List the medical uses of some organic acids:
  - Formic acid
  - Acetic acid
  - Citric acid

- Lactic acid

### 8. ACID DERIVATIVES:

- Acid chlorides e.g., ethanyl chloride
- Amides e.g., ethanamide
- Acid anhydrides e.g., ethanoic anhydride
- List some important esters and their medical uses:
  - Nitroglycerine
  - Methyl salicylate
  - Ethyl amino benzoate

### 9. NITROGEN CONTAINING ORGANIC COMPOUNDS:

- Amines, amides and amino acids
- State the general formula of amines, amides and amino acids
- List a few examples of amines and amino acids
- State the type of amines with examples:
  - Primary
  - Secondary
  - Tertiary
  - Quaternary ammonium compounds
- Discuss the important properties of amines e.g., basic nature
- State the medical importance of amines
- State the importance of urea (diamide)
- Discuss amino acids as building blocks of proteins
- State the amphoteric nature of amino acids

### 10. AROMATIC COMPOUNDS:

- Define aromatic compounds e.g., benzene, toluene, etc.
- Discuss the structure, physical properties, physiological action and uses of benzene and toluene

## Semester I

- Explain the chemical reactions of benzene:
  - Substitution (nitration, sulphonation)
  - Addition (hydrogenation, chlorination)
- Discuss briefly fused ring hydrocarbons: naphthalene, anthracene, etc.
- Discuss the derivatives of benzene (preparation, properties and medical uses):
  - Chlorobenzene (with ammonia and aq. NaOH) formation of aniline, formation of phenol
  - Nitro benzene (reduction)
  - Aniline (basic nature, ester formation)
  - Phenol derivatives
  - Benzaldehyde (oxidation, reduction)
  - Benzoic acid (acidic reactions, etherification)
  - Salicylic acid (formation of methyl salicylate, sodium and salicylate)
  - Phenyl salicylate and aspirin
- Define alicyclic compounds
- List examples of alicyclic compounds
- Discuss Baeyer's strain theory
- State properties and uses of cyclopropane
- Define "heterocyclic compounds"
- List a few examples of heterocyclic compounds
- Discuss psychoactive drugs
- Define "alkaloid"
- List a few alkaloids and uses

## Unit 3 | Biochemistry

### 1. CARBOHYDRATES:

- Define carbohydrates

- Classify carbohydrates on the basis of their solubility in water (sugars and con-sugars)
- Discuss sugars, non-sugars, monosaccharides, oligosaccharides and polysaccharides, with examples of each
- Compare the properties of mono and polysaccharides
- Explain the chemical reactions of monosaccharides:
  - Oxidation
  - Reduction
  - Fermentation
  - Reducing action
- State the physiological importance of glucose
- Briefly discuss the chemical importance of glucose
- Briefly discuss polysaccharides e.g., starch, cellulose, glycogen, dextrin, heparin, etc.
- Discuss the tests for monosaccharides, reducing sugars and starch
- List the important uses of mono and polysaccharides

## 2. LIPIDS:

- State the general properties of lipids
- Discuss fatty acids (saturated and unsaturated)
- Classify lipids into simple compounds and derived lipids
- Discuss the chemical nature of fats, oils and waxes
- State the physical properties of fats
- Explain the chemical reaction of fats:
  - Hydrolysis
  - Saponification
  - Hydrogenation
  - Rancidity
  - Compare soaps and detergents

## Semester I

### 3. PROTEINS:

- Discuss the sources, functions and molecular weight of proteins
- Classify proteins into simple, conjugated and derived proteins
- Discuss amino acids:
  - Composition
  - Amphoteric nature
- Explain the properties of proteins:
  - Peptide formation
  - Hydrolysis
  - Colloidal nature
  - Denaturation
- Explain the conditions causing denaturation
- Discuss the color tests for proteins

### 4. ENZYMES:

- Define enzymes
- State how the enzymes differ from non-biologic catalysts
- State the properties and physiological importance of enzymes
- Discuss the role of pH, temperature, concentration, etc. upon an enzyme
- Discuss:
  - Activator
  - Inhibitor (specific and non-specific)
  - Apoenzyme
  - Coenzyme
- Explain the enzymatic function
- Discuss the classifications of enzymes

## UNIT 4 | PRACTICALS

- Identify and use the laboratory equipment e.g., burettes, pipettes, balances, etc.



- Preparations of standard solutions of different molarity (minimum three preparations e.g., sodium carbonate and sodium hydroxide volumetric analysis)
- Acid base titrations by using various indicators e.g., methyl orange phenolphthalein, etc.
- Reactions of selected functional groups:
  - Alcohols
  - Aldehydes
  - Ketones
  - Acids
- Characteristics tests for:
  - Glucose
  - Starch
  - Proteins
  - Fats

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**Teaching/Learning Strategies:**

- Lectures/discussions
- Assignments
- Charts
- Demonstrations

**Instructional Materials:**

- Textbooks  
*Basic Chemistry*
- Charts: Periodic table

**Course Expectations:**

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory

## Semester I

- Complete all assignments and take examinations on due dates

### Course Evaluation:

#### Assessment Criteria – Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Psychosocial (Psychology/ Sociology)

**Credits:**

2

**Placement:**

First year, Semester I

**Duration:**

16 weeks (14 instructional and 2 for exams) 28 classrooms hours

**Course Description:**

The course is a combination of both psychology and sociology and is designed to facilitate greater understanding of the principles of human behavior. For the Psychological part of the course the learner will be able to assimilate concepts and theories of psychology with emphasis on growth and development as well as factors influencing behavior across the life span. For sociology, the learner will gain knowledge on society its characteristics, norms, customs and beliefs, family structures, gender, social determinants of health and their effect on health seeking behaviors and eventual health outcomes.

**Broad Objectives:**

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

- Define relevant terms and concepts in psychology
- Explain the relevance of psychology/sociology to midwifery practice
- Understand critical factors of growth and development throughout the life span
- Recognize the various standards of psychological tests and methods of utilization in clinical situations
- Utilize behavioral science principles in all aspects of care
- Manage clients with stress and maladaptive behavior
- Apply psychological and sociological concepts in providing emotional support and counseling to patients with both physical and psychological conditions
- Understand the social determinants of health in health promotion, disease prevention and care provision.
- Understand the relevance of Interpersonal Communication and counseling( IPCC) in behavior change

## Semester I

- Demonstrate skill in using counseling techniques to assist client/patient and develop methods suitable for solving their problems
- Educate patients about stress and its effect on human adaptation and coping

### **Specific Objectives:**

As a result of this course, to meet these objectives, the student will be able to:

- Define the various main branches of psychology
- Analyze critical factors of growth and development throughout the life span
- Explain the contemporary perspective used in explaining human behavior
- Describe the theoretical base for psychosocial assessment
- Identify the building blocks of effective coping
- List and explain theories of personality development
- Identify factors that influence human behaviour
- Demonstrate skill in using counseling techniques to assist client/patient and develop methods suitable for solving their problems
- Describe effective and ineffective uses of defense mechanisms in physical illness
- Identified IPCC techniques needed to enhance quality of care during interactions with clients
- Interpret the phases of stress and coping
- Define sociology
- Name and outline the functions of social institutions
- Discuss social determinants of health
- Explain cultural beliefs and practices that affect the health of people

### **Course Content:**

#### **1. INTRODUCTION TO PSYCHOLOGY:**

- Definition of terms
- Psychology
- Behavior

- Branches of psychology
- Theories and concepts in psychology
- Importance of psychology to midwifery
- Contemporary perspectives that explain human behavior

## **2. GROWTH AND DEVELOPMENT:**

- Definition:
  - Growth
  - Development
- Principles of growth and development
- Theories of psychosocial development: intellectual and emotional:
  - Piaget
  - Freud
  - Skinner
  - Erickson
- Factors influencing growth and development:
  - Genetics constitution
  - Environment

## **3. PERSONALITY:**

- Definition
- Theories of personality
- Personality development:
  - Factors influencing personality development (Psychological, physiological, sociocultural)
  - Characteristics
  - Personality traits
  - Temperament and emotional state:
    - Attitude
    - Adjustment and defense mechanism

## **Semester I**

- Frustration and conflict
- Stress
- Psychological effects of being a client
- Anxiety, fear, withdrawal

### **4. MOTIVATION AND HUMAN NEEDS:**

- Definition of motivation:
  - Theories of Motivation
  - Motivation Theories
  - Theories of human needs:
    - Maslow's Hierarchy of needs:
      - Herzberg's theory

### **5. MOTIVATION AND THE LEARNING PROCESS:**

- Definitions
- Theories of learning
- Forms of learning:
  - Conditioning
  - Trial and error
  - Cognitive
  - Memory:
    - Intelligence
    - Psychosocial counselling
    - Psychological assessment

### **6. SOCIOLOGY:**

- Definition of concepts:
  - Socialisation
  - Social institutions
  - Culture:
    - Sub-culture
    - Elements/components of culture

- Social norms
- Beliefs
- Values
- Customs and practices
- Cultural practices and beliefs that affect health:
  - Health beliefs and practices and their influence on health
  - Sociology of illness and health
  - Traditional societies
- Taboos and religion
- Social institutions:
  - Family:
    - Definition
    - Types of families
    - Functions
    - Roles and relationships of family members
    - Health and family
  - Marriage:
    - Definition
    - Types of marriages
  - Gender:
    - Definition
    - Gender roles
    - Gender and health
    - Gender based violence
- Sociology and Health:
  - Social determinants of health
  - Culture and health
  - Health belief and practices and their influence on health
  - Gender and health
  - Religion and health
  - Relevancy of sociology in midwifery

## Semester I

- Application of sociology in midwifery
- Demography

### 7. A THEORETICAL BASE FOR PSYCHOSOCIAL ASSESSMENT:

- Psychosocial assessment in the physical care setting:
  - Liaison psychiatry
  - Mid-level healthcare contribution to the health care process
  - What is adaptation?
  - Psychosocial assessment factors
- Crisis and stress
- Ways of responding to someone in crisis
- Phases of stress and coping:
  - Stress reaction: acute phase
  - Stress reaction: reaction phase
  - Stress reaction: repair phase
  - Stress reaction: reorientation
- The building blocks of effective coping:
  - Drive theory
  - Affect
  - Object relations
  - The id, ego and super-ego
  - The conscious, subconscious and unconscious
- Effective and ineffective uses of defense mechanisms:
  - Denial
  - Avoidance
  - Conversion
  - Compensation
  - Displacement
  - Regression



- Reaction formation
- Rationalization
- Dissociation
- Identification
- Isolation
- Idealization
- Projection
- Substitution

#### **8. EFFECTIVE COMMUNICATION:**

- Set of values consistently found to accompany the most effective communication style:
  - Empathy
  - Respect
  - Genuineness
  - Positive regard
  - Non-judgmental stance
  - Empowering
  - Practical
  - Confidentiality
  - Ethical conduct

#### **9. PSYCHOSOCIAL MEASURES:**

- Interpersonal communication and counseling:
  - Definition/description:
    - Interpersonal
    - Communication
    - Counseling
  - Elements
- Essential concepts related to IPCC:
  - Perception

## Semester I

- Values
- Attitude
- IPCC and the rights of the client:
  - Every health client has the right to:
    - **Information:** To learn about the benefits and availability of services
    - **Access:** To obtain services regardless of sex, creed, color, marital status or location
    - **Choice:** To decide freely whether to practice any service and which service to use
    - **Safety:** To be able to practice safe and effective health services
    - **Privacy:** To have a private environment during counseling or services
    - **Confidentiality:** To be assured that any personal information will remain confidential
    - **Dignity:** To be treated with courtesy, consideration and attentiveness
    - **Comfort:** To feel comfortable when receiving services
    - **Continuity:** To receive contraceptive services and supplies for as long as needed
    - **Opinion:** To express views on the services offered
- IPCC techniques:
  - Listening
  - Questioning
  - Paraphrasing and summarizing
- IPCC and GATHER:
  - Six steps:
    - **GREET** the clients (establishing rapport)
    - **ASK** clients (gathering information)
    - **TELL** (provide information)
    - **HELP** the client (this is the decision-making or problem-solving moment)
    - **EXPLAIN** to the client (uses client education material to help the client remember key information specific to that decision)
    - **RETURN/REFER/REALITY CHECK** (advice concerning when to return for follow-up or re-supply and to do a reality check with the client)
- IPCC and essential components of effective counseling:

- Establishing rapport (Greet)
- Gathering information (Ask)
- Providing information (Tell)
- Helping client make a decision, solve a problem (Help, Explain)
- Next steps (Return)
- IPCC and IEC materials:
  - What are IEC materials:
    - Flip charts
    - Brochure
    - Posters
    - Pamphlets
    - Booklets
    - Cue cards
- Barriers to use of IEC materials:
  - They are not available (stored away or not at the service site)
  - Don't know the importance of using
  - Lacking knowledge on how to use them
  - Language barrier (if in the local language)
  - They need more time to use
  - Negligence
  - Assume client already knows so no need to see them
  - Not told by supervisor to use them
  - Using them takes too much time
- Advantages of using IEC materials:
  - For provider:
    - Attract the client's attention
    - Trigger discussion and help bring up questions from clients
    - Make something small big enough to be visible (i.e., eggs, types of IUD)
    - Compare similarities and differences (i.e., types of IUD)
    - Show steps in doing something (i.e., insertion of IUD)

## Semester I

- Show changes (i.e., growth of a fetus from conception to delivery)
- Make complete ideas easy to understand
- Show something that cannot be seen in real life (i.e., position of IUD in the uterus)
- Help when discussing a sensitive topic such as FP or HIV AIDS
- Clients can take print materials home as reminders
- Clients can share print materials with spouse and friends
- For client:
  - Help to make the best decision
  - Help to understand what to expect when making a particular decision
  - Help to remember the accurate usage/treatment
  - Help to understand how contraceptive method works inside the body (as an example)
  - Can be taken home to be a reminder
  - Can be shown/distributed to partner or friends
- For provider:
  - No opportunity for discussion unless service provider reviews with clients
  - Can be expensive to produce
  - If not well made, pages may tear when flipping over
- For the client:
  - Less effective with people who do not read
  - Can be easily lost and sometimes are thrown out without reading
  - The message may not be understood by audience; may need explanation
  - Not good for large groups
- Audience may not remember everything if there is too much information

# Clinical Title: (Psychosocial (Psychology/ Sociology Clinical)

## Clinical Description:

### Psychosocial Practicum Description:

This provides an opportunity for learners to carry out psychosocial assessment for clients and initiate counselling where indicated. The learner will work in various setting under the supervision of the course instructor to develop relevant and appropriate interventions to promote health and prevent diseases amongst individual, families and communities. The practicum also allows for collaboration, consultation and forging of partnerships with various stakeholders in the provision of care.

### Objectives:

At the end of the course, the learner will be able to:

- Assess clients for signs of psychosocial disturbances
- Apply psychological and sociological concepts in the counselling of clients.
- Collaborate with individuals, families and community to influence positive health behavior.
- Analyse the effects of culture and religion on health promotion and health seeking behaviours in communities.
- Integrate social determinants of health related to customs, social norms and gender in the promotion of health and care provision to individuals, families and communities

### Placement:

- Communities
- Schools
- Hospitals/Clinics

## Semester I

### Competencies

Knowledge	Attitudes/Behavior	Skills
Behavioral and social sciences Philosophy, the arts and humanities	Values liberal learning as a solid foundation for the development of the clinical judgment skills required for the practice of professional midwifery and critical thinking	Applies knowledge regarding social, political, economic and historical issues to the analysis of societal and professional problems  Appreciates cultural differences and bridges cultural and linguistic barriers  Understands the nature of human values
Understands the physiological, psychosocial, developmental, spiritual, and cultural influences on effective communication	Values individual cultural and personal diversity  Respects persons' rights to make decisions in planning care	Chooses the right setting and time to initiate conversation  Assesses the patient's readiness/willingness to communicate
Demonstrates knowledge of diverse traditional and religious practices of individuals, families and communities	Appreciates the effects of traditional and religious practices on the health of individuals, families and communities.	Incorporates harmless traditional and religious practices of different communities in rendering health care.  Educates individuals, families and communities on harmful practices related to health.
Describes advocacy skills necessary for health promotion	Recognizes own professional responsibility in advocating for all clients	Seeks information from different sources on behalf of the client(s) regardless of gender, race, colour, creed and physical abilities
Utilises knowledge on family structures to influence the health of individuals, families and communities	1Recognises the importance of family-centred care in health promotion and care provision to individuals, families and communities.	Identifies social problems and provides interventions in partnership with clients and family members
Analyses social determinants of health	Recognises social factors that promote health or hinder positive health seeking behaviours.	Identifies social risk health factors affecting the health of individuals, families and communities.
Describes the effects of culture, religion and gender on health promotion.	Recognises societal values and beliefs about health.	Demonstrates cultural and gender sensitivity in the provision of care

### Course Expectations:

The student is expected to:

- Regularly attend class and laboratory sessions

- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

**Teaching/Learning Strategy:**

- Illustrated lectures
- Group discussions
- Role Play
- Community project
- Field visits
- Group presentations
- Simulations
- Community project, field visits

**References:**

*Psychosocial Nursing Assessment and Intervention*, P.D. Barry

Louw, D. A. & Edwards, D. J. A. (1998). *Psychology*, Johannesburg: Heinemann.

Niven, N. & Robinson, J. (1994). *The Psychology of Nursing Care*

**Assessment Criteria – Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Introduction to Information Communication Technology (ICT) & Research Methodology

**Credits:**

2

**Duration:**

16 weeks (14 instructional and 2 for exams) 28 classrooms hours and 48 lab hours

**Placement:**

First year, First semester

**Introduction/Course Description:**

The increasing application of information communication technology (ICT) to all spheres of human endeavor makes it important that the health workers stay abreast of ICT and its application to health care. This course is designed to introduce the student to ICT and its importance to health care delivery and enable the student to apply and demonstrate the concepts of information communication technology in the health care delivery system.

**General Objectives:**

- Describe and classify computers
- Explain the components of computers and computer-based systems
- Demonstrate basic concepts and computer skills
- Demonstrate competence in computer operation
- Describe the use of various software programs designed to assist in specific computer-based activities
- Demonstrate the ability to use software programs in task completion
- Demonstrate competency in the use of the computer in communication
- Demonstrate the use of the computer to access web-based information and resources
- Work in an interdisciplinary team to make ethical decisions regarding the application of technologies and the acquisition of data
- Adapts the use of technologies to meet patient needs



- Protects the safety and privacy of patients in relation to the use of health care and information technologies
- Uses information technologies to enhance one's own knowledge base

**Specific Objectives:**

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

- Perform basics foundational Computer skills
- Manage Files and Folders
- Create And Edit Documents
- Create and Edit Slide-Based Presentations
- Find Information On The World Wide Web
- Communicate With Others Using Electronic Mail
- Create and Edit Spreadsheets
- Uses appropriate technologies in the process of assessing and monitoring patients

**Course Content:**

**PART I – INTRODUCTION TO THE COMPUTER**

*Foundational Computer Basics*

**Unit 1 | Description and Classification of Computers**

**1. EVOLUTION OF COMPUTERS**

**2. CLASSIFICATION OF COMPUTERS**

**3. SYSTEM COMPONENTS:**

- Hardware – descriptions and functions:
  - Central Processing Unit/Hard Drive
  - Monitor
  - Keyboard
  - Mouse
  - Disk drive

## Semester I

- External storage devices:
  - Flash drive
  - External hard drive
  - Cameras and other peripheral devices
- Search software:
  - Internet Explorer
- Output devices:
  - Printer
  - Visual display/monitor
  - Plotters, etc.
  - Scanners
- Main memory:
  - Read only memory (ROM)
  - Random access memory (RAM)
- Function of main storage:
  - Input storage area
  - Working storage area
  - Program area
  - Output area
- Computer files:
  - Logical files, physical files, reference files
- File arrangement:
  - Random access, sequential, index sequential
- File processing:
  - Batch processing, online processing, real-time processing, multi-user
- Storage (secondary or auxiliary storage):
  - Hard disk
  - External hard drives

- Storage capacities
- USB flash drive, CDs, etc.
- Computer use for data creation and processing:
  - Data creation
  - Data transmission
  - Data processing and analysis
  - Computer packages e.g., Minitab, SPSS, Epi. info
- Manage files and folders:
  - The concept of the Desktop
  - Opening My Computer
  - Opening and closing windows
  - Navigating folders
  - Renaming files and folders
  - Copying and pasting files and folders
  - Deleting files and folders
  - Restoring items from the recycle bin
  - Turning off the computer
- Basic concepts and analytic skills:
  - Software:
    - System program
    - Application program
    - Utility program
    - Translation program
    - Basic operating system software:
      - Microsoft Windows
    - Microsoft Office:
      - Email
      - Word
      - PowerPoint
      - Excel

## Semester I

- Other accessory programs
- Create documents:
  - Launching Microsoft Word
  - Adding text to the document
  - Formatting text
  - Font and size
  - Bold, italics and underline
  - Alignment
  - Bulleted list
- Inserting objects:
  - Clip Art and pictures
  - Shapes
  - Tables
- Saving the document
- Opening existing documents
- Closing Microsoft Word
- Create slide-based presentations
- Launching Microsoft PowerPoint
- Adding a title and subtitle
- Adding a new slide
- Changing the slide layout
- Formatting text:
  - Font and size
  - Bold, italics and underline
  - Alignment
  - Bulleted list
- Inserting objects:
  - Clip Art and pictures

- Shapes
- Tables
- Running a slide show
- Saving the document
- Opening existing presentations
- Closing Microsoft PowerPoint
- Create spreadsheets:
  - What is a spreadsheet
  - Introduction to Excel Tools
  - Manipulating the cell
  - How to print an Excel sheet
  - Closing Excel

## **Unit 2 | Use of the Internet**

- Computer security:
  - Computer viruses
  - Protective security software
  - Rules for the “safe” use of computers to avoid viral contamination
- Communication – Networking, internet and email:
  - Email
  - Skype
- Find information on the World Wide Web (“Web”):
  - Launching Internet Explorer
  - Accessing Google using the address field
  - Searching for information using Google and search terms
  - Using hyperlinks to access web pages
  - Navigating website menus
  - Analyzing the quality of information on the Web

## Semester I

- Closing Internet Explorer
- Communicate with others using Email:
  - What is the Electronic Mail?
  - Programs use for emails
  - Web mail vs. POP/IMAP
  - Sending attachment
  - Email vs. FAX/Postal
  - Choosing the right one
  - Exiting
- ICT in health care:
  - Electronic/digital devices:
    - Diagnostic devices: ultra sound scan, CT scan, MRI, fluoroscopy, etc.
    - Monitoring devices: oximeter, cardiac monitor, etc.
    - Treatment devices: radiotherapy, physiotherapy, surgery, chemotherapy
  - Telemedicine
  - Information search: research, evidence-based care, etc.
  - Effect of ICT on quality health care

# Information Communication Technology Clinical Description

## Laboratory Practice Description:

The laboratory component of this course provides the learner with an opportunity to enhance their basic assessment skills of the computer. The practicum gives the learner an opportunity to carry out direct observation and hands on activities in a computer laboratory to develop relevant knowledge and skills in knowing how to use a computer for evidence based information in the diagnosing and treatment of patients. The practicum allows for collaboration and consultations with the instructor and members of the class.

## Objectives:

At the end of this course, the learner will be able to:

- Boot a computer
- Manage Files and Folders
- Create and Edit Documents
- Create and Edit Slide-Based Presentations
- Find Information on the World Wide Web
- Communicate With Others Using Electronic Mail
- Create and Edit Spreadsheets

## Clinical Placement:

- Computer Laboratory

## Skills to be Learned:

- Booting and shutting down the computer
- Launching windows
- Creating and saving a document
- Making changes to a document
- Inserting save text
- Reorganizing a document outline
- Finalizing a document

## Semester I

- Formatting text
- Preparing Power Point slides and presentations
- Launching and browsing the World Wide Web
- Using the WWW as a research tool

### Resource Materials:

- Computers
- Soft Ware drivers

### Competencies

Knowledge	Attitudes/Behaviors	Skills
<p>Describes examples of how technology and information management are related to the quality and the safety of patient care</p> <p>Recognizes the time, effort, and skill required for computers, databases, and other technologies to become reliable and effective tools for patient care</p>		<p>Responds appropriately to clinical decision-making supports and alerts</p> <p>Uses information management tools to monitor outcomes of care processes</p> <p>Works in an interdisciplinary team to make ethical decisions regarding the application of technologies and the acquisition of data</p> <p>Uses applications for structured data entry (e.g., patient acuity or classification)</p> <p>Uses high quality electronic sources of health care technology to deliver care across settings</p>

### Assessment:

- Practical assessment including OSCE for practical exams
- Performance identification of the computer

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### Teaching/Learning Strategies:

- Classroom presentations
- Group exercises
- Demonstration



- Coaching
- Homework and laboratory assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

**Assessment:**

- Practical assessment including OSCE for practical exams
- Performance identification of the computer

**References:**

Data communication and networking, William A. Shay

Computer mathematics, Shaum Publishing Company, 1999

Ed. Paulson, 1996. The Complete Communications Handbook, 2nd edition, word ware publishing, Inc.

**Required Resources:**

- Computer

# Course Title: Fundamentals of Midwifery I

**Credits:**

4

**Placement:**

First semester of first year

**Duration:**

56 hours classroom

168 hours laboratory

**Introduction/Course Description:**

This course is the foundation for the practice of midwifery in the home, community and health institution and for further professional education. This course is an introduction to the profession of midwifery and how midwives and midwifery care can promote the health of women and childbearing families globally. It exposes the students to the importance of health as a basic human right, the basic skills in caring for patients with emphasis on women and newborns, Midwifery philosophy and model of care; midwifery care process, including critical thinking and clinical decisions-making with an overview of the scope of midwifery practice; and roles and responsibilities of the midwife and the International Confederation of Midwives (ICM). In this course students will learn to work in a health team, obtain vital signs, and practice infection prevention, perform basic procedures and integrate interpersonal skills into midwifery care. This course forms the basis for student understanding and appreciation of midwifery as an independent profession.

**Course Objectives:**

- Understand the health care delivery system of Liberia and the determinants of health on women, girls and newborns
- Discuss the history of midwifery as a profession and its role in improving the health of women
- Appreciate the development of midwifery as an independent profession
- Appreciate the role of the International Confederation of Midwives and its role in enhancing midwifery
- Understand the role and responsibilities of the midwifery education programs, regulatory bodies and professional associations in midwifery
- Build comfortable interpersonal relationships with patients/peers and health care team members using communication techniques
- Demonstrate implementation of the midwifery process

- Explain basic procedure needed in carrying for patients

**Specific Course Objectives:**

- Identify the structure and functions of health care institutions and agencies
- Discuss the history of midwifery as a profession
- Explain the basic concepts and tools relevant to midwifery practice
- State the ICM definition of a midwife
- Describe the midwifery scope of practice in Liberia and how it harmonizes with the ICM scope of practice
- Discuss the core competencies of a midwife in service delivery
- Discuss the concept of interpersonal communication and its importance in midwifery care
- Utilize standard precautions and infection prevention procedures with patients
- Practice obtaining and recording of vital signs
- Demonstrate common procedures performed providing patient care, including bed making
- Explain the principle of physical care of client/patient

**Course Content:**

**Unit I | Health, the Health Care Delivery and the Health Team**

**1. HEALTH- AS A HUMAN RIGHT**

**2. HEALTH CARE DELIVERY SYSTEM**

**3. HEALTH CARE INSTITUTIONS AND AGENCIES:**

- Structure and function of primary, secondary and tertiary health care institutions
- National and international health agencies and associations in health care delivery e.g., World Health Organization, Red Cross, United Nations International Children's Fund, National Association of Nurse and Midwives, International confederation of midwives (ICM). International Council of Nurses, etc.

**4. MINISTRY OF HEALTH & SOCIAL WELFARE:**

- Organogram

## **Semester I**

- National Health Policy & Plan
- Essential Package of Health Service

### **5. SOCIAL DETERMINANTS OF WOMEN AND NEWBORN HEALTH**

### **6. HEALTH CARE SERVICES:**

- Primary - Community, clinic
- Secondary - health center, hospitals
- Tertiary - referral hospitals
- Curative services:
  - Clinic
  - Health center
  - Hospital
- Preventive services:
  - Health education
  - Behavior Change Communications(BCC)
  - Information Education and Communications (IEC)
- Preventive Service Delivery:
  - Deworming
  - Bed Nets
  - Immunization programs
  - Nutrition

### **7. MAJOR CHALLENGES:**

- Financial
- Poverty
- Literacy Levels
- Personnel
- Transportation
- Drug and supplies

- Communication
- Maintenance

## **Unit II | Trends and Prospective in Midwifery**

### **1. DEFINITION:**

- Midwifery
- Midwife

### **2. HISTORY AND TRENDS OF MIDWIFERY:**

- History of nursing and midwifery: History of midwifery in Liberia
- History of midwifery education
- History of nursing and midwifery education in Liberia

### **3. MIDWIFERY CARE:**

- Midwifery philosophy and model of care
- Midwifery care process including critical thinking and clinical decisions-making
- Midwifery scope of practice
- International Confederation of Midwives ICM
- Core Competencies and Standards:
  - Aims and Objectives-Pillars
  - Organization structure
  - Definition of a midwife
  - Scope of practice
  - Code of ethics
- ICM Core Competencies:
  - Family Planning (Healthy Timing and Spacing of Pregnancies)
  - Health education and services
  - Antenatal Care
  - Labor and delivery

## Semester I

- Postpartum
- Care of the neonate
- Abortion related care
- ICM Standards of education and regulation:
  - Glossary and terms
  - Purpose of Midwifery Education Standards
  - Values and Principles
  - Intended use of standards
  - Key Details Addressed
  - ICM Organization of Standards:
    - Organization and administration (6)
    - Midwifery faculty (8 plus 8 subparts)
    - Student body (6 plus 8 subparts)
    - Curriculum (6 plus 4 subparts)
    - Resources, facilities & services (5 plus 5 subparts)
    - Assessment strategies (5 plus 5 subparts)

## **4. THE CHARACTERISTICS OF MIDWIFERY AS A PROFESSION AND THE ROLE OF THE MIDWIFE:**

- Family
- Women and newborn
- Community
- Health faculties
- Donors/NGOs/partners
- Nation
- Foundations of midwifery: Current trends and issues in midwifery practice
- Midwifery concepts, theories and models
- Midwifery management process
- Social cultural practices in child bearing

**5. ROLE OF THE MIDWIFE IN THE HEALTH CARE DELIVERY SYSTEM:**

- Definition
- Classifications
- Qualifications
- Job description
- Role of health team members

**6. LEGAL AND ETHICAL CONSIDERATIONS:**

- Ethics and clinical approaches
- Negligence and mal-practice
- Criminal acts

**7. PRINCIPLES FOR MIDWIFERY PRACTICE:**

- Nursing and midwifery boards
- Nurse and Midwife Practice Acts
- Liberia Nurse and Midwife Practice Act
- Midwifery education, regulation and associations/councils

**8. CONCEPTS AND TOOLS IN MIDWIFERY:**

- Quality Assurance
- Communication process – interpersonal communication:
  - Levels:
    - Intrapersonal
    - Interpersonal communication
    - Public
    - Elements
    - Modes
    - Factors influencing communication
    - Therapeutic communication
- Concept of information, education and communication (IEC) and Social and Behavior Change communication (SBCC)

## Semester I

- Reporting and recording in midwifery
- Concept of health management information system
- Techniques of rehabilitation

## Unit III | Basic Patient Care Diagnostic Procedures: Procedures and Processes

- Assessment
- Diagnoses
- Plan
- Implementation
- Evaluation
- Documenting, reporting and, conferring including care plans, hospital charting

### 1. MEDICAL AND SURGICAL ASEPSIS/INFECTION PREVENTION AND CONTROL:

- Introduction to micro-organisms:
  - Kinds and characteristics of disease producing microorganisms
  - Control of microorganisms:
    - Infection Control:
      - Infection cycle
    - Methods of Infection prevention and control:
      - Hand washing
      - Sterilization
      - Disinfection
      - Medical Asepsis
      - Surgical Asepsis
      - Isolation techniques

### 2. VITAL SIGNS, PATIENT MEASUREMENT AND DIAGNOSTIC PROCEDURE:

- Temperature:
  - Heat production



- Heat loss
- Heat regulation
- Fever – causes
- Care of patient with a fever
- Pulse:
  - Characteristics of Pulse
  - Sites and Methods of taking a pulse
  - Types of pulse
  - Factors causing variation in pulse
- Respiration:
  - Normal Respiration
  - Breath Sounds
  - Regulation of Respiration
  - Factors causing variation
- Blood Pressure:
  - Arterial and Venous BP
  - Equipment and method of taking a BP
  - Factors causing variation in BP

### **3. HEALTH ASSESSMENT AND PHYSICAL EXAMINATION:**

- Techniques in P.E.:
  - Observation
  - Auscultation
  - Percussion
  - Palpation
- Height and Weight

## Semester I

### 4. HYGIENE:

- Physical needs:
  - Skin care/Hygiene:
    - Bath- adult, children and newborns
  - Types of Bath:
    - Self-bath
    - Complete Bath
    - Partial bed bath/Sponge Bath
    - Therapeutic Bath
    - Tepid sponge bath
    - Sitz bath
  - Care of the hair, feet, nails, eyes, nose, ear, perineal and vaginal areas
  - Oral/Mouth Care

### 5. ELIMINATION:

- Bowel
- Urinary:
  - Bed pan and urinals
  - Caring, inserting and cleansing of tubes:
    - Rectal
    - Nasogastric
    - Urinary catheter

### 6. COMFORT MEASURES:

- Causes of discomfort:
  - Pain
  - Environmental Factors
  - Poor Body Alignment
  - Anxiety and fear
- Measure to Promote Sleep:
  - Importance of sleep

- Factors that influence sleep
- Care to Promote Sleep

#### **7. BED MAKING:**

- Principles of bed making
- Preparation of trolleys for different types of bed making
- Simple unoccupied beds and cots
- Use and care of beds accessories (cradle, bed table, air-ring, etc.)
- Special beds (admission, post-operative, cardiac, divided bed, etc.)
- Types of Beds:
  - Open Bed
  - Closed Bed

#### **8. EXERCISE**

#### **9. BODY MECHANICS:**

- Principles
- Helping patient to ambulate
- Safety measures
- Range of Motion
- Moving, turning, lifting the patient

#### **10. POSITION OF THE PATIENT:**

- Principles
- Different Positions:
  - Dorsal recumbent
  - Trendelenburg
  - Lateral
  - Knee-chest
  - Jack knife
  - Sims

## **Semester I**

- Prone
- Lithotomy
- Protective positions:
  - Supine
  - Fowler's
  - Side Lying
  - Prone
- Safety measures:
  - Transporting and transferring of patient
  - Dangers of newborn sleeping with mother

### **11. INTERVENTIONS FOR A PATIENT WITH DISCOMFORT:**

- Medications
- Application of Heat and Cold
- Rest and sleep

### **12. RESTRAINTS**

### **13. PROBLEMS OF IMMOBILIZATION:**

- Decubitus Ulcer:
  - Prevention
  - Treatment
  - Constipation
  - Respiratory Problems
  - Muscle-skeletal problems

### **14. NUTRITION:**

- Basic Principles- feeding patients
- Feeding Tube - NG (Enteral Tube Feeding)
- Conditions for Alternative Food Needs:
  - Dysphagia

- Comatose

#### **15. ENEMAS AND RECTAL TREATMENTS:**

- Position of patient
- Types of enema
- Removal of fecal impaction
- Formula for special enemas
- Photolysis
- Rectal suppositories

#### **16. BANDAGES AND BINDERS:**

- Classification
- Directions for application
- Special bandages
- Application binders

#### **17. CATHETERIZATION:**

- Purpose and equipment needed
- Sterile specimens
- Catheterization of male and female patients
- Retention catheters
- Bladder irrigation
- Bladder installation

#### **18. DIAGNOSTIC PROCEDURE:**

- Collection of specimens and selected diagnostic procedures:
  - Urine
  - Stool
  - Blood
  - GI fluids
  - Sputum

## **Semester I**

- Discharge from body
- X-ray
- Electrocardiography

### **19. ADMISSION AND DISCHARGE:**

- Admission of Patients:
  - Patient History
  - Patient Data:
    - Objective
    - Subjective
  - Orientation to the hospital
- Discharge and transfer of patients:
  - Policies and procedures
  - Discharge Instructions
  - Follow-up Instructions/When to return to the clinic

# Fundamentals of Midwifery 1 (Clinical)

## Clinical Practice Description:

The clinical component of Fundamentals of Midwifery I will be conducted in the skills laboratory where the student will be taught basic skills that will enable them to progress to more complex skills. This equips the learner with knowledge, skills and attitudes required to provide comprehensive midwifery care to individuals, families and communities.

## Objectives:

On completion of this clinical course, the learner will be able to:

- Conduct assessment of patients, individuals and communities, especially the midwifery client
- Build a working relationship with individuals and families with regard to self-care.
- Demonstrate safe practice in executing designated health care skills
- Provide for physical safety of patient
- Protect patient from emotional harm
- Seek assistance from instructor or other healthcare member for care which is beyond the learner's level of knowledge or experience
- Comply with hospital policies and procedures
- Provide first aid to clients with- in emergency conditions
- Provide basic care to clients across the life span.

## Clinical Placements:

- General wards
- Clinical Laboratory skills

## Practical Skills:

- Performing Admission procedures
- Performing Hand washing techniques
- Performing Bed making techniques
- Bathing a patient:
  - Bed bath

## Semester I

- Shower bath
- Assisted bath
- Providing Oral care
- Taking of height and weight
- Taking and recording temperature, pulse, respiration, and blood pressure
- Conducting Physical assessment
- Preparing Care Plans
- Moving, lifting and positioning patients
- Measuring and recording fluid intake and output
- Care of hair and nails
- Serving meals
- Feeding clients
- Inserting naso-gastric tube
- Administering Oxygen
- Collecting and disposing specimens
- Examination of specimens
- Reading/interpreting lab results (Urinalysis, etc.)
- Performing suctioning procedures
- Decontamination procedures
- Bandaging techniques
- Splinting procedures
- Performing procedures for Artificial respiration
- Conducting Cardiac massage
- Performing gloving procedures
- Downing protective clothing
- Passing of flatus tube



- Transfer and discharge procedures

## Competencies

Knowledge	Attitude/Behaviour	Skills
Understands responsibilities inherent in being a member of the midwifery profession	Values the key principle in the midwifery process	<p>Understands the history and philosophy of the midwifery profession</p> <p>Incorporates professional midwifery standards and accountability into practice</p> <p>Advocates for professional standards of practice using organizational and political processes</p> <p>Understands limits to one's scope</p>
Understands components of midwifery process appropriate to the woman , family, group, community midwifery care needs during the intrapartum.	<p>Values use of scientific inquiry, as demonstrated in the midwifery process, as an essential tool for provision of nursing and midwifery care</p> <p>Respects and encourages the patient's/Client's input relative to decisions making about proposed health care.</p>	<p>Conducts clinical interview, develops and implements care plan, and evaluates the provision of care.</p> <p>Demonstrates cognitive, affective, and psychomotor skills when delivering patient care</p>
<p>Integrates understanding of activities of daily living in the provision of patient centered care:</p> <ul style="list-style-type: none"> <li>– Information, communication, and education</li> <li>– Physical comfort and emotional support</li> <li>– Mobility and homeostasis needs.</li> <li>– Involvement of family and significant other</li> </ul>	<p>Respects and encourages individual expression of patient values, preferences, and needs</p> <p>Values the patient's expertise with own health and symptoms</p>	<p>Performs competently basic patient skills:</p> <ul style="list-style-type: none"> <li>– Bed making, vital signs, bed bath, eye care, hair and mouth care, feeding, medication administration, elimination, ambulation, prevention and care of pressure sores, wound dressing, infusion/transfusion, hygiene needs, recording and reporting, care of the dying patient, suture removal, basic emergency care (First aid).</li> <li>– Demonstrates caring behaviors toward patient, significant others, and groups of people receiving care</li> <li>– Communicates patient values, preferences, and expressed needs to other members of health care team</li> </ul>

## Semester I

Knowledge	Attitude/Behaviour	Skills
		<ul style="list-style-type: none"> <li>– Seeks information from appropriate sources on behalf of patient, when necessary</li> </ul>
<p>Demonstrates understanding of the concepts of pain, palliative care, and quality of life(Pain management)</p>	<p>Appreciates the role of the midwife in relieving all types and sources of pain and suffering</p> <p>Recognizes personally held values and beliefs about the management of pain and suffering and end-of-life care</p>	<p>Assesses presence and extent of physical and emotional comfort</p> <p>Elicits expectations of patient and family for relief of pain, discomfort, or suffering and end-of-life care</p> <p>Initiates treatments to relieve pain and suffering in light of patient values, preferences, and expressed needs</p>
<p>Understands the roles and responsibilities in Infection Prevention and Control (IPC):</p> <ul style="list-style-type: none"> <li>– Transmission of infections</li> <li>– Nosocomial infections</li> </ul>	<p>Recognizes that both individuals and systems are accountable for infection prevention and control.</p> <p>Appreciates the importance of Post Prophylaxis Exposure (PEP)</p>	<p>Uses appropriate strategies to reduce transmission of infection</p> <p>Demonstrates effective use of technology and standardized practices that support safe practice.</p> <p>Applies Universal Precautions in provision of care.</p>
<p>Describes legal and regulatory factors that apply to midwifery practice</p>	<p>Values professional standards of practice</p> <p>Values and upholds legal and regulatory principles</p>	<p>Uses recognized professional standards of practice</p> <p>Implements plan of care within legal, ethical, and regulatory framework of nursing and midwifery practice</p> <p>Complies with mandated reporting regulations (proper documentation)</p>
<p>Identifies own strengths, limitations, and values in functioning as a member of a team</p>	<p>Recognizes responsibility for contributing to effective team functioning</p> <p>Values the perspectives and expertise of other team members.</p> <p>Appreciates the importance of collaboration</p>	<p>Demonstrates self-awareness of strengths and limitations as a team member</p> <p>Initiates plan for self-development as a team member</p> <p>Acts with integrity, consistency, and respect for differing views</p>

### Teaching/Learning Strategies:

- Classroom presentations
- Group exercises

- Educational games
- Demonstration
- Coaching
- Homework and laboratory assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

**Required Resources:**

- Library
- Skill lab
- Internet
- Blackboard/flipchart
- Notebook/handout

**References:**

Sanoski, C., and Vallerand, A. (2012). Davis's drug guide for nurses. (13th ed.). Philadelphia: F. A. Davis Co.

Doenges, M., Moorhouse, M., and Murr, A. (2010). Nurses pocket guide: Diagnoses, prioritized interventions and rationales. (12th ed.). Philadelphia: F. A. Davis Co.

Lynn, P. (2011). Taylor's clinical nursing skills: A nursing process approach. (3rd ed.). Philadelphia: Lippincott, Williams, Wilkins, & Wolters Kluwer.

Smeltzer, S., Bare, B., Hinkle, J., and Cheever, K. (2010). Brunner and Suddarth's textbook of medical-surgical nursing. (12th ed.). Philadelphia: Lippincott, Williams, Wilkins, & Wolters Kluwer.

Taylor, C., Lillis, C., LeMone, P., and Lynn, P. (2011). Fundamentals of nursing. (7th ed.). Philadelphia: Lippincott, Williams, Wilkins, & Wolters Kluwer.

Van Leeuwen, A. and Poelhuis-Leth, D. (2011). Davis's comprehensive handbook of laboratory and diagnostic tests with nursing implications. (4th ed.). Philadelphia: F. A. Davis Co.

**Semester I**

Venes, D. (2009). Taber's cyclopedic medical dictionary. (21st ed.). Philadelphia: F. A. Davis Co.

Jhpiego Infection Prevention Manual.

ICM

ICN

Regional Regulatory Framework, WHO

**Course Evaluation:**

Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# **Semester II | Course Outline**

**PHC I/Introduction to Primary Health Care**

**Nutrition**

**Ethical & Professional Adjustment**

**Fundamentals of Midwifery II**

**Anatomy & Physiology II**

**Midwifery I: Reproductive Health and Family Planning**

**Pharmacology/Drug Calculation**



# Course Title: Introduction to Primary Health Care (PHC I)

**Credits:**

2

**Placement:**

Second semester of first year

**Durations:**

16 weeks (14 instructional and 2 for exams)

28 Classroom hours

**Course Description:**

This course is designed to equip the student with the concepts of primary health care, especially as it relates to the rural setting in Liberia, and how the various disciplines relate to it and to each other. Also this course is design to increase awareness of students about basic principles of working with the community for community based/directed activities.

**Broad Objectives:**

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

- Understand the concept of primary health care and its 3 levels, especially as it relates to the rural setting
- Understand the organization of the Liberian health services with regards to the role they play in primary health care
- Understand the role of other health workers in the primary health care system
- Be able to explain the component of primary health care for the delivery of health services
- Understand the MOHSW process for quality improvement

**Specific Objectives:**

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

- Define health and PHC as stated/defined by WHO
- Describe the concept of Primary Health Care (PHC)
- Explain the WHO declaration on “Health for All by the Year 2000”
- Describe the Bamako Initiative and its role in PHC

## **Semester II**

- Describe the MOHSW organizational chart and the role of PHC within the MOHSW
- Explain the PHC with the EPHS Framework
- Describe the MOHSW process for Quality Improvement
- Differentiate the roles/functions of PHC team members
- Explain cultural beliefs and practices as they relate to PHC

### **Course Content:**

#### **1. INTRODUCTION:**

- Description of course and overview of objectives
- WHO definition of Health and PHC and its goal of “Health for all”
- The Alma Ata declaration
- PHC concept
- PHC and its components
- Bamako Initiative
- Millennium Development Goals

#### **2. ORGANIZATION OF HEALTH SERVICES:**

- The National Health Policy and Essential Package of Health Services
- The National Community Health Policy and Strategy:
  - Training and supervising Community level workers/community health volunteers
- Preventive vs. curative
- Comparison of costs of preventive vs. curative
- Health workers/population ratio
- Concept of team approach to PHC

#### **3. CULTURE AND HEALTH:**

- Expectations of the community
- Cultural beliefs and practices
- Traditional medicine



- Incorporating complementary medicine into PHC

#### **4. PRIMARY HEALTH WORKERS/AUXILIARIES:**

- Definitions and classifications:
  - Functions of Primary Health Workers (PHW) & general Community Health Volunteers (gCHVs)
- Training and supervising the CHV
- Interaction with other health workers

#### **5. COMPONENTS OF PHC FRAMEWORK FOR DELIVERY OF SERVICES:**

- Preventive
- Health education
  - Community based/directed Programs: MCH:
    - Under-fives
    - Integrated Community Case Management/community directed IMNCI
  - Antenatal
  - Immunizations
  - Family planning:
    - Community based Family Planning
    - Healthy Timing and Spacing of Pregnancy
- Nutrition
- Environmental sanitation

#### **6. WORKING WITH COMMUNITY – COMMUNITY DIRECTED/LED PROGRAMS:**

- What is a community
- Four elements of all community:
  - Shared means of communication
  - Shared leadership
  - Shared values
  - Shared culture (beliefs and practices)

## Semester II

- Causes of ill health in Communities:
  - Individual
  - Community
  - National
  - International
- A framework for transformation to healthy communities:
  - Maslow's Ladder of human needs
- Key Principles for working WITH Communities:
  - Aim for Transformation of Communities-work WITH Communities and the work is done BY communities
  - Practice Praxis – a spiral of reflection and action-provide situations where the community can “Do-Look-reflect-plan”
  - Use Dialogue – Listening and speaking by the community
  - Based on Problem posing and problem solving by all
  - Mindful that no education is neutral – must liberate
- Role of health care providers at the community level:
  - Animator – person with dialogue education training and transformative leadership skills
  - Role of the Animator:
    - Provide organization and order
    - “State in an organized manner what the community have said in a disorganized or confused way”
    - Animator- Help community members:
      - To open up/unveil their situations
      - Encourage group discussion
      - Ask open ended questions
      - Paraphrase and summarized
      - Build on participants contribution
      - To learn from all – animator and participants
- Dialogue Education Principles/Essential factors needed for transforming communities

- **Respect** – animators actions show respect that is observed and felt by participants/learners
- **Immediacy** – “How soon can I use this?”
- **Relevance** – communities will learn and do faster and more permanently that which is significant to them and to their present lives
- **Safety** – People need to feel safe to challenged and hold the opposite views
- **Reason/Benefits** – community will learn, do faster and more permanently if they understand the reason why for actions and changes would benefit them
- **Engagement** – People learn and do more when they are actively involved, doing what they are learning:
  - 20% of what we hear
  - 40% of what we see and hear
  - 80% of what we hear, see & DO
- **Inclusion** – Without inclusion of all, a community is fragmented and no progress is made. With inclusion, especially in leadership the community takes ownership and is moved to collaborate
- Process of working to transform communities:
  - Survey – quantitative and qualitative information gathering
  - Analysis of survey material
  - Preparation of problem posing materials:
    - Codes
    - Description

## 7. PRESENTATION AND DISCUSSION OF PROBLEMS:

- Steps:
  - Present a problem (discussion starter):
    - Using prepared audio visual materials (the CHEST Kit/Journey of Hope Kit)
    - Description of Problem: What did you see or hear?
    - First Analysis: Why do you think it happened?
    - Real Life: Have anyone seen or heard this problem in real life
    - Second Analysis: Why did this problem happened in real life
    - Action Planning: What can we do to solve the problem

**8. QUALITY ASSURANCE/QUALITY IMPROVEMENT IN HEALTH CARE:**

- Concept of Quality Improvement/Assurance (QI/A):
  - Definition of Quality
  - Perspective of Quality
  - Dimension of Quality
  - Principles of Quality
- Standard Based Management and Recognition (SBMR)
- MOHSW Quality Improvement Process:
  - Developing standards
  - Measuring Standards
  - Implementing Standards
  - Recognizing Standards

## **Clinical Title: Primary Health Care (Clinical)**

### **Clinical Description:**

The practicum provides an opportunity for learners to carry out client assessments in a variety of community-based settings so as to develop relevant and appropriate interventions to promote health and prevent diseases amongst individual, families and communities. The practicum allows for collaboration, consultation and forging of partnerships with various stakeholders, referral and continuity of care.

### **Clinical Objectives:**

At the end of the course the learners will be able to:

- Understand the concepts of primary health care
- Understand the organization of the Liberian health services with regards to the role they play in primary health care
- Recognize the role of other health workers in the primary health care system

### **Clinical Placement Settings:**

- Health centers
- Community
- Schools

### **Clinical Skills:**

- Community health assessment
- Documentation and reporting
- Family health assessment
- Community mobilization
- Community project planning and implementation

## Semester II

### Competencies

Knowledge	Attitudes/Behavior	Skills
Understands system theory in the planning, organizing and delivery of patient care. Understands types of midwifery practice and delivery systems Understands the role and responsibilities of the health care team members in fiscal and resource management to achieve quality outcomes	Appreciates the complexity of the midwifery practice environment and the effect on individual and group practice Appreciates the impact of practice setting decisions on the organizational system Acknowledges the tension that may exist between a goal driven model vs. a resource driven care delivery model Values the contributions of each member of the health care team and the organizational system in evaluating the effectiveness of resources	Contributes to the plan of care for a patient or groups of patients considering both the environment and resources Identifies system resources, effectively allocates them appropriately at the care delivery level Collaborates with colleagues and leadership to focus and prioritize resources so that the needs of individuals are served Evaluates outcomes of care and uses data to promote change and to efficiently achieve desired outcomes

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### Teaching/Learning Strategies:

- Lecture
- Discussion
- Role play
- Group assignment

### Instructional Materials:

- Textbooks and references

### Course Expectations:

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

### Course Evaluation:

**Assessment of Learning:**

- Formative assessment
- Group projects:
  - Community needs assessment
  - Individual project: Family case study
- Summative assessment:
  - Observation: Implementation of a health promotion program in the community (Practical)

**Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

**References:**

Primary Health Care Materials-WHO

Global Learning Partners- Materials form Learning to Listen Learning to Teach Course – based on Malcolm Knowles & Jane Vella Principles

Communicating About Health, A Guide for Facilitators, K. Tompkins,

MOHSW and WHO documents

# Course Title: Nutrition

**Credits:**

2

**Placement:**

First year, second semester

**Duration:**

16 Weeks (14 instructional and 2 for exams)  
28 classroom hours

**Course Description:**

This course enables the learner to acquire knowledge of nutritional elements and needs of persons across the lifespan. Psycho-social factors influencing eating habits are discussed as well as their importance in the promotion of health, and in the provision of therapeutic diet in health and illness. The role of nutrition in the prevention of non-communicable diseases (NCDs) and malnutrition will be emphasized, as well as, prioritize essential nutrition actions (ENA) which address the health and nutritional needs, especially of children and women in vulnerable communities.

**Broad Objectives:**

On successful completion of this Course the learner will:

- Apply the appropriate knowledge, skills and attitudes concerning nutrition, and nutritional principles and their application to the nutritional needs in Liberia
- Demonstrate understanding of the values, functions and sources of nutrients/food
- Understand the factors that influence eating habits to promote healthy lifestyle and prevention of NCDs.
- Manage common selected nutritional disorders
- Demonstrate knowledge and skill in the education of families on the different nutrients and their importance to health for various age groups.

**Specific Objectives:**

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

- Identify food sources of macronutrients and major types of micronutrients
- Describe the physiological functions of each nutrient
- Identify factors affecting bioavailability of nutrients
- Recognize the normal nutrient requirements under different physiological conditions



- Identify the vulnerable periods for age groups & sex where there is higher need for specific nutrients
- Identify factors affecting nutritional requirement
- Identify the common methods used for nutritional assessment
- Differentiate indexes and indicators used for assessing community nutritional status
- Discuss nutritional deficiencies
- Classify nutritional deficiency states
- Identify common causes of nutritional deficiencies in Liberia
- Describe the various nutrition interventions with emphasis on ENA
- Describe the essential nutrition actions approach and the 6 contact points
- List key breast feeding messages
- Explain the duration of EBF and the age for introduction of complementary food
- Define the five main breast problems
- Name causes of breast problems
- Diagnose main breast problems
- Counsel the mother about prevention of breast problems
- Treat simple breastfeeding problems
- Define weaning
- Name the conditions of an appropriate weaning
- List Key Complementary feeding messages
- Describe the baby friendly hospital initiative criteria
- Discuss the Code of Marketing of BMS
- Explain interventions to break intergenerational cycle of malnutrition
- Identify target group for Iron, folic acid and Vitamin A supplementation
- Name the advantages related to the prevention of iron/folic acid deficiency among mother and newborns
- Describe role and function of Iodine

## Semester II

- Identify problems associated with Iodine deficiency
- List Options for prevention of Vitamin A, Iron and Iodine deficiency
- Describe the nutrition of a sick child
- List Key behaviors of Sick child feeding
- List Infant feeding options in the context of HIV/AIDS
- Explain the importance of Women nutrition in the Context of HIV/AIDS
- Define nutritional surveillance
- Identify and list key indicators for assessing Community's nutritional status
- Identify indicators used for IYCF
- Identify indicators for Micronutrient deficiencies
- Prepare and present health talks on nutrition
- Prepare and demonstrate to the class the selection and preparation of local foods

### Course Content:

#### 1. INTRODUCTION:

- Overview
- Theories and Principles of Nutrition
- Role of nutrition in health maintenance
- Role of health personnel in nutrition education and promotion
- Culture and food practices
- Liberian feeding practice

#### 2. FOOD AND NUTRITION: ORGANIC AND INORGANIC FOODS AND THEIR FUNCTIONS:

- Organic: carbohydrates, proteins, fats and oils, vitamins
- Inorganic: Mineral, salts
- Food sources and optimal nutrition for the promotion and maintenance of health and prevention of disease

**3. METABOLISM:**

- Anabolism, catabolism, basal metabolic rate
- Metabolism in relation to gender, activity and special conditions
- Absorption, digestion, and vital functions of the macronutrients (protein, carbohydrate and fat) and the micronutrients (vitamins and minerals)

**4. NUTRITIONAL NEEDS:**

- Functions of food in the body
- Changing food needs during the life cycle: from conception, intrauterine etc.

**5. TYPES OF NUTRIENTS AND THEIR FOOD SOURCES:**

- The six nutrient Groups:
  - Protein
  - Carbohydrate
  - Lipid
  - Vitamins (Vitamin A)
  - Minerals (Iron, Iodine, Zinc)
  - Water
- Major food sources:
  - Breast milk: composition of breast milk, factors that affect the quality and quantity of breast milk, breast-feeding
  - Foods of animal origin (Animal milks, white and brown meats, egg)
  - Foods of plant origin (fruits vegetables, cereals, legumes)
  - Common food sources of Nutrients in the community
  - Factors affecting bioavailability of nutrients
  - Function of food

**6. NUTRITIONAL REQUIREMENTS:**

- Recommended Daily Allowances:
  - Calorie and protein requirements
  - Caloric composition of diet

## Semester II

- Variation of nutritional requirement at different ages and physiological conditions:
  - Growth, development in infancy and childhood
- Nutritional requirements:
  - Infancy
  - Childhood
  - Adolescence
  - Pregnancy
  - Lactation
- Factors affecting nutritional requirement:
  - Illness
  - Growth
  - Environmental temperature
  - Body composition
  - Physical activity
  - Age and sex

### **7. FOOD HYGIENE:**

- Preservation and storage of foods
- Effects of processing on food nutrients
- Sources of contamination: in the home, chop-bars, food vendors

### **8. FOOD CONSUMPTION AND INFLUENCING FACTORS:**

- Pattern of food consumption
- Factors influencing food consumption: economic, social, physical
- Changes in nutritional needs throughout the life cycle (including special considerations during pregnancy, lactation and aging)
- The role of nutrition in disease prevention and clinical nutrition
- Food habits: harmful habits, harmless/good habits

### **9. HEALTH EDUCATION IN NUTRITION:**

- The role of the nurse and midwife in nutrition education

## 10. NUTRITION AS AN INTERDISCIPLINARY APPROACH TO HEALTH CARE AND DISEASE PREVENTION FOR INDIVIDUALS AND COMMUNITIES

### 11. NUTRITIONAL ASSESSMENT:

- Definitions of nutritional assessment:
  - Assessment vs. measurement:
    - Assessment Methods- Growth monitoring – use of scale for weight, Shakir strip, height and Road-to-Health cards
    - Anthropometric
    - Biochemical/biophysical
    - Clinical
    - Dietary
- Indirect methods of assessment
- Advantages and disadvantages of the four methods
- Quality control measures
- Calibration of equipment
- Taking appropriate measurements
- Validity and reliability issues Index
- Indicators
- Cut of points for admissions to TFC & SFC centers for adults and children

### 12. NUTRITIONAL INTERVENTIONS:

- Nutritional interventions options:
  - Nutritional education and counseling:
    - Using Adult Education principles- Methodology and content
    - Interpersonal Communication
    - How to work with the community to identify a community's nutritional problems
    - Economic approaches
    - Dietary modification/increased production
    - Dietary diversification

## Semester II

- ENA:
  - The role of the nurse and midwife in nutrition education
  - Nutrition as an interdisciplinary approach to health care and disease prevention for individuals and communities
- Six Contact points for ENA:
  - Pregnancy
  - Delivery
  - Postnatal and Family Planning
  - Immunization sessions
  - Well child and growth monitoring and promotion (GMP)
  - Sick child/IMNCI treatment
- Advantages and disadvantages of the above interventions in different settings (urban vs. rural)

### **13. NUTRITIONAL INTERVENTION 2: ENA & BREASTFEEDING:**

- Essential Nutrition Actions (ENA):
  - The seven actions:
    - Optimal breastfeeding
    - Optimal complementary feeding
    - Feeding of the sick child

### **14. NUTRITIONAL INTERVENTION 2: ENA & BREASTFEEDING:**

- Essential Nutrition Actions (ENA):
  - The seven actions:
    - Optimal breastfeeding
    - Optimal complementary feeding
    - Feeding of the sick child
    - Women's nutrition
    - Prevention of IDA
    - Prevention of Vit A deficiency
    - Prevention of IDD
  - The six critical contact points:
    - Pregnancy
    - Delivery

- Post natal
- Immunization
- Growth monitoring and Promotion
- Sick child visit
- Optimal breastfeeding behaviors:
  - Benefits of breastfeeding
  - The key messages on optimal breastfeeding practices for Liberia
  - Current recommendations about breastfeeding:
    - Infants should be exclusively breastfed the first 6 months of life
    - Infants should not receive artificial or animal milk
    - Infants should continue breastfeeding until 2 years of age or more, in addition to increasing quantities of complementary food and liquids administered with a cup
- Exclusive breastfeeding:
  - Definition: infant receives only breast milk, without any other food, until 6 months of age (EBF 8-12 times in 24 hours, No use of bottle, No use of teats)
  - Techniques for a successful exclusive breastfeeding: ensure appropriate positioning and attachment
  - Advantages of exclusive breastfeeding:
    - Nutritional
    - Economic
    - Protection of the infant against different diseases
    - Natural
    - Ready and available
- Breastfeeding recommendations:
  - Placed baby at the breast immediately after delivery
  - Advantages of early initiation:
    - Favors uterine contractions and reduces the risk of hemorrhage
    - Favors milk production
    - Colostrum contains antibodies (first immunization), plus proteins and vitamin A
    - Has a laxative effect
    - Helps to prevent jaundice

## Semester II

- Mother should breastfeed her baby on demand, day and night, at least 10 times in 24 hours
- Evaluation of the technique of breastfeeding and newborn:
  - Positions for a breastfeeding mother:
    - “American football” position: useful for mother with C-section, for and when the woman has painful nipples
- Appropriate positioning:
  - Mother comfortable
  - Baby close to the mother
- Signs of an appropriate attachment:
  - Nose of the baby touches the breast
  - Baby’s mouth widely open
  - More areola visible in the upper part
  - Lips turned outwards
- Signs of an efficient breastfeed:
  - Rhythmic, slow and regular suckles, 2 suckles:1 swallowing
  - Softer breast after breastfeeding
- Signs that show the baby is getting enough milk:
  - Baby breastfeeds 6-8 times a day
  - Frequent and yellow stools
  - Weight increase
- Breast problems:
  - Sore nipples:
    - Definition: Painful nipples while breastfeeding
    - Causes: poor attachment, poor positioning, candidiasis, contact eczema
    - Signs: Pain in the nipple while breastfeeding
    - Management: appropriate positioning and attachment, do not wash the nipple with soap, do not wash the nipple more than once a day, wait for the baby to let the nipple go, do not apply cream or other product on the nipple. In case of candidiasis Nystatin or gentian violet on the baby’s mouth and mother’s nipple
  - Engorgement:
    - Definition: Accumulation of blood, milk and other fluids in the breast



- Causes: inappropriate milk removal, infrequent breastfeeds, inhibition of the ejection reflex
- Signs: hard, heavy and distended breasts
- Management: massage the breasts and express milk (with hand or pump), continue frequent and efficient breastfeeds, cold compresses after each feed, analgesics as needed
- Cracked nipples:
  - Definition: cracks in the nipple skin
  - Causes: poor positioning, engorgement, irritation due to soap or lotions, candidiasis, contact eczema
  - Signs: damaged nipple skin, pain, no fever
  - Management: appropriate positioning and attachment, moist local heat, stimulate ejection reflex pre-suction, apply breast milk to the nipples, and let them dry. Treat candidiasis, avoid bra with synthetic lining
- Mastitis - inflammation of the breast:
  - Apply compresses for 3 to 5 minutes before each breastfeed
  - Do not stop breastfeeding
  - Use antibiotic according to prescription, and analgesics for the pain
  - Breastfeed frequently
  - In case of fever
  - Use compresses
- Weaning:
  - Definition of weaning: Progressive diversification of feeding through gradual introduction of solid foods
  - Conditions of an appropriate weaning
  - Start at 6 months of age, when breast milk is insufficient to satisfy the increasing growth needs of the infant
  - Progressive introduction of complementary foods
  - Diverse foods: vegetables, fruits, eggs, meat, fish
  - Continue breastfeeding
  - Avoid sudden cessation of breast milk

### **15. NUTRITIONAL INTERVENTION 3: COMPLEMENTARY FEEDING:**

- Optimal Complementary feeding behaviors - Key messages for Liberia

## Semester II

- Feeding the infant 6-12 months old:
  - Infant formula/supplementary feeding:
    - Types of infant formula e.g. cow, goats, etc.
    - Use and preparation of infant formula
    - Introduction to family diet – complementary feeding
    - Flour: rice, cassava, vegetable juice, soup, meat, fish, egg
    - Factors affecting complementary feeding e.g. poverty, ignorance, taboos, etc.
    - Factors affecting the choice of food e.g. body needs, cultural and ethnic background, religion, socio-economic status availability of food, geographical area and health status
    - Menu: quantity, quality, feeding technique

### **16. NUTRITIONAL INTERVENTION 4 PROMOTION OF BREASTFEEDING AT INSTITUTIONAL LEVEL:**

- Promotion of optimal breastfeeding behaviors at facility level:
  - The 10 criteria for the baby friendly hospital initiative
  - International Code of marketing of Breast Milk Substitutes (BMS)
  - The role of health workers in application of the code

### **17. NUTRITIONAL INTERVENTION 5 WOMEN'S NUTRITION:**

- Women's Nutrition- Key messages
- Nutritional Needs of Pregnant and lactating women
- Recommended intake of nutrients during pregnancy and lactation
- Need for extra nutrients related to physiologic changes in mother and fetus
- The effect of malnutrition in pregnancy and lactation

### **18. NUTRITIONAL INTERVENTION 6 MICRONUTRIENTS:**

- Prevention of Vitamin A deficiency
- Supplementation (Universal vs. Disease Targeted)
- Consumption of Vit A rich foods
- Breast feeding Food fortification

- Strategies for vitamin A supplementation:
  - As part of the treatment for some illnesses
  - Systematically, from the 6 months of age on and every 6 months
- Vitamin A:
  - Favors appropriate growth and development
  - Strengthens the resistance of the organism to illnesses and infections
  - Contributes to the reduction of infant mortality:
    - The importance and need of supplementation with vitamin A at the time of immunizing the child
  - Prevention of Iron deficiency anemia:
    - Immediate
    - Counsel the pregnant woman to consume 1 tab/day of iron/folic acid during 6 months
    - Long term
    - Encourage pregnant women to consume food rich in iron: meat, vegetables
    - The woman should continue with iron/folic acid tab if did not complete six months during pregnancy
- Advantages of use of iron/folic acid:
  - For the mother:
    - Increased working capability
    - Increase of the mental capability
    - Greater resistance to infections
    - Prevention of anemia during pregnancy
    - Less risk of hemorrhage during pregnancy
  - For the newborn:
    - Increase hemoglobin
    - Better health
- Iron and folate supplementation and treatment of anemia in women and children
- Supplementation, fortification, food diversification
- Malaria prevention and control
- De worming children and Pregnant women

## Semester II

- Prevention of IDD:
  - Universal supplementation of Iodized salt
  - Role of iodine in the child and adult:
    - Growth
    - Intelligence
    - Goiter
  - Problems due to iodine deficiency:
    - Fetal way
    - Cretinism: neurological, myoedematosus
    - Hypothyroidism
    - Goiter

### **19. NUTRITIONAL INTERVENTION 7 SICK CHILD FEEDING:**

- Feeding Sick Child during and after illness: Key messages

### **20. NUTRITIONAL INTERVENTION 8: IYCF AND WOMEN'S NUTRITION IN THE CONTEXT OF HIV/AIDS:**

- IYCF and women's Nutrition In the context of HIV/AIDS:
  - Infant feeding options for the HIV positive mother(The AFASS concept):
    - Exclusive breastfeeding for 6 months with early cessation if AFASS
    - Wet nursing by HIV negative women
    - Expressed heat treated breast milk
    - Exclusive replacement feeding
    - Commercial infant formula
  - Home modified animal milk:
    - Advantages and disadvantages of each Infant feeding option
    - IF counseling skills:
      - HIV Negative/unknown status
      - HIV positive mothers
      - Women nutrition and HIV/AIDS

**21. NUTRITIONAL INTERVENTION 9: PREVENTION AND MANAGEMENT OF MALNUTRITION:**

- Nutritional deficiency states:
  - Define malnutrition [Under nutrition/Over nutrition]
  - Causes of malnutrition - the conceptual framework
  - Non-food causes of nutritional disorders:
    - Cultural
    - Agricultural
    - Transportation
- Classification and signs and symptoms:
  - Under weight, stunting, marasmus (wasting), kwashiorkor, marasmic – kwash, obesity
  - Micronutrient deficiencies [IDD, VAD, IDA, Vit DD (Rickets, beriberi, scurvy, pellagra), Anemia – from deficiencies in iron, B-12 or folic acid]
- Prevention and Management of severe malnutrition:
  - Early warning signs
  - Need assessment
  - TFC, SFC, GRD
- Evaluating emergency intervention programs

**22. DIETARY MANAGEMENT OF DEFICIENCY DISEASES:**

- Protein-energy malnutrition:
  - Kwashiorkor
  - Marasmus
  - Mineral deficiencies
  - Vitamin deficiencies
- Dietary management of illnesses/conditions:
  - Diabetes mellitus
  - Peptic ulcer
  - Hypertension
  - Obesity

## Semester II

- Others
- Interventions to maintain nutritional status in illnesses/conditions

### **23. FOOD PRESERVATION/FOOD PROCESSING/FOOD COSTS:**

- Food spoilage
- Food storage methods
- Food-borne diseases
- Sources of food and its cost

### **24. MONITORING AND EVALUATION:**

- Nutritional surveillance:
  - Early warning signs
  - GMP
  - Food security
  - Nutritional emergencies
- Indicators
- Timely initiation of breast feeding
- EBFR
- Timely CFR
- LAM Rate
- Total goiter rate
- Prevalence of anemia
- Prevalence of Bitot's spots/night blindness
- Death rate
- Discharge rate
- Transfer rate
- Recovery rate

## Clinical Course Description

This course is designed to equip the learner with the skills, knowledge and attitude of care related to patients with nutritional deficiencies. The learner will also learn the various techniques of feeding patients and monitoring and evaluation of nutritional status.

### Clinical Objectives:

At the end of this course, the learner will be able to:

- Assess patient with protein- calorie malnutrition
- Monitors the laboratory results of patient with protein-calorie malnutrition
- Plan nutritional interventions for the sick and well adults
- Administer parenteral nutrition
- Care for patients receiving parenteral nutrition
- Carry out nutritional teaching

### Clinical Placement:

- Hospital Wards
- Out-Patient Department
- Community

### Resources:

- Naso-gastric tubings
- Gloves
- Syringe(20ml)

### Competencies

Knowledge	Attitudes/Behavior	Skills
Understand the values, functions and sources of nutrients/food	Appreciates the provider's role in assisting the patient/family's to understand the values, function and sources of nutrients/food	Demonstrated the preparation of cereal use as weaning food made from at least 2 traditional Liberian foods
Name the six ENA contact points	Recognizes the role of the midwife as leader in encouraging ENA Willing to be flexible to meet patient nutritional needs.	Carryout health education activities at the contact points Assists patients and families in accessing and interpreting health information and

## Semester II

Knowledge	Attitudes/Behavior	Skills
	Accepts the role and responsibility for providing health education to patients and families	identifying healthy nutritional practices
Understands the principles managing patients with nutritional disorders	Values different means of caring for patients and families with nutritional disorders Values the patient's and family's right to know the reason for chosen interventions	Assist the patient and families to obtain needed micronutrients and supplies through the health system Apply appropriate interventions in caring for patients with nutritional disorders

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### Teaching/Learning Strategies:

- Lectures and demonstrations
- Role play
- Group assignment/discussion

### Audio-visual Aids, Teaching and Learning Equipment/Supplies:

- Overhead projector
- LCD projector and PC
- Black board
- Flip chart stand
- Transparencies
- Chalk
- Flip charts
- Handouts
- Flip chart stand
- Breast models
- Dolls
- Infant feeding counseling tool
- Markers



**Course Expectations:**

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

**Assessment Criteria — Standard Grading System: (modified for English)**

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

**Instructional Materials:***Textbooks and References:*

National strategy for IYC feeding

ENA Technical Module

Lecture note on nutrition

Modules on Micronutrients

National food comparison tables

Garrow J.S., James W.P.T. Human Nutrition and dietetics

Latham, M.C., Human nutrition in tropical Africa

Dudek S.G. Nutrition Handbook for Nursing Practice

Waterlow JC. Protein-Energy Malnutrition, National food tables

Rosiland Gibson. Principles of nutritional assessment

Nutrition essentials book

Manual for treatment of severe malnutrition

Infant feeding counseling tool

Nutrition for Developing Countries, Felicity King, Maurice King, David Morley, Leslie Burgess, Ann Burgess.

Perspectives in Nutrition, 3rd Ed., Gordon M. Wardlaw and Paul M. Insel.

Food, Nutrition and Diet Therapy, 11th Ed., L. K. Mahum and Sylvia Escott-Stump.

Essentials of Nutrition and Diet Therapy, 7th Ed., Sue R. Williams.

Basic Package of Health Services, MOHSW, Liberia, 2008.

National Nutrition Policy, MOHSW, October 2008

Food and Nutrition Handbook, WFP.

# Course Title: Ethical and Professional Adjustment

**Credits:**

2

**Duration:**

16 weeks (14 instructional and 2 exams) 28 Classroom hours

**First year:**

Semester 2

**Pre-requisites:**

All first year semester I courses

**Course Description:**

This course is designed to provide an introduction to the concept of professional, legal and ethical frameworks used in decision-making in midwifery. It provides opportunities for discussion of concepts on moral and ethical responsibilities related to midwives, other health care providers, patients and institutions. Principles of professional practice and professional regulation in nursing and midwifery will be highlighted. This course will help the students to identify ethical and religious concerns with regards to midwifery and give them the foundation for management in midwifery.

**Broad Objective:**

After completing this course, students will be able to:

- Apply ethical principles in making professional judgments as midwives
- Apply ethical theories and principles when addressing ethical issues in the practice of midwifery
- Utilise professional practice principles to guide midwifery practice
- Understand the importance of practice within the scope of practice as provided for in law
- Demonstrate awareness of rights and obligations in the delivery of midwifery care
- Analyse factors that impact on self-regulation and professional practice

**Specific Objectives:**

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

- Define ethics
- Discuss the nursing/midwifery code of ethics

- Name and describe ethical principles and theories
- Discuss the ethical responsibilities of the nurse/midwife
- Explain ethical and religious concerns at the clinical area
- Describe ways ethical decisions are made
- State the legal procedures for practices and licensure of CM, RM, CNM
- State and discuss ways of approaching ethical issues
- State Kohlberg's theory of moral development
- Differentiate between personal values, societal values, professional values, organizational values and moral values

**Course Content:**

**1. INTRODUCTION TO ETHICS:**

- Definition of ethics
- Ethical Principles and Duties:
  - Autonomy
  - Beneficence
  - Non-maleficence
  - Veracity
  - Confidentiality
  - Justice
  - Fidelity
  - Disclosure
- Ethical Theories:
  - Utilitarianism
  - Deontology
  - Egoism
  - Christian approach
  - Ethical Decision Making Models

## Semester II

### 2. ETHICS AND MORALITY:

- Kohlberg's Theory of Moral Development:
  - Level I – Pre-Conventional level
  - Level II – Conventional level
  - Level III – Post-Conventional level

### 3. LEGAL AND ETHICAL CONSIDERATIONSLEGAL TERMINOLOGIES:

- Fraud
- Right to privacy
- Invasion of privacy
- False imprisonment
- Defamation
- Slander
- Libel
- Assault
- Battery
- Legal Issues:
  - Ethics and law
  - Sources of law
  - Types of law:
    - Negligence and malpractice
    - Misconduct
    - Criminal acts
    - Code of ethics

### 4. APPROACHES TO ETHICAL ISSUES:

- Non-rational approach:
  - Obedience
  - Imitation
  - Feeling or desire

- Intuition
- Habit
- Rational approaches:
  - Deontology
  - Consequentialism
  - Principlism
  - Virtue
- 5. ETHICS AND VALUES:**
  - Personal values
  - Societal values
  - Moral values
- 6. RIGHTS AND HEALTH CARE:**
  - Nurse's/midwife's Rights and Responsibilities
  - Patient Rights and Responsibilities
  - Patient rights as human rights
  - Reproductive health Laws
- 7. ETHICAL DILEMMAS IN HEALTH CARE:**
  - Use of ethical decision-making models
- 8. ETHICS AND MIDWIFERY:**
  - Issues:
    - Secrecy ethics
    - Office ethics
    - Professional ethics
    - Professional courtesy
    - Privileged communication
    - Confidentiality
    - Privacy

## Semester II

- Fidelity
- Veracity
- Preferential treatment
- Professional Regulation for Midwifery
- ICM Code For Midwives
- The Nightingale Pledge
- Procedure for licensure
- Nursing and midwifery board
- Nursing/Midwifery practice act
- Nursing and midwifery associations/organisations

### **9. SCOPE OF PRACTICE IMPLICATIONS OF LAW ON MIDWIFERY PRACTICE:**

- Negligence
- Misconduct
- Malpractice
- Crimes
- Theft
- Self-medication
- Illegal abortions
- Adolescent Sexual and Reproductive Health/FP for adolescent
- Tip and gifts/nutrition

### **10. ETHICS AND NATIONAL/INTERNATIONAL ORGANIZATIONS:**

- WACN – West African College of Nursing
- LPHA – Liberian Public Health Association
- Liberian Midwifery Association(LMA)
- Liberian Board for Nursing and Midwifery (LBNM)
- WHO – World Health Organization

- ICN – International Council of Nursing
- UNICEF – United Nations Children Funds
- International Planned Parenthood Association
- International Red Cross

### Competencies

Knowledge	Attitude/Behaviour	Skills
Understands the concept of accountability for own behavior	Accepts responsibility for own behavior	Demonstrate skills in accountability for own nursing/midwifery practice.
Describes legal and regulatory factors that apply to midwifery practice	Values professional standards of practice Values and upholds legal and regulatory principles	Uses recognized professional standards of practice Implements plan of care within legal, ethical, and regulatory framework of nursing/midwifery practice Complies with mandated reporting regulations
Describes the role of a professional organization shaping the practice of midwifery	Values the mentoring relationship for professional development	Participates as a member in professional organizations Complies with the mandates of professional organizations.
Understands ethical principles, values, concepts, and decision making that apply to midwifery and patient care	Values the application of ethical principles in daily practice Values acting in accordance with codes of ethics and accepted standards of practice Clarifies personal and professional values and recognizes their impact on decision making and professional behavior	Incorporates Nurses/midwives Code of Ethics into daily practice Utilizes an ethical decision-making framework in clinical situations Identifies and responds to ethical concerns, issues, and dilemmas that affect nursing/midwifery practice Participates in efforts to resolve ethical issues in daily practice Recognizes moral distress and seeks resources for resolution Applies a professional nursing/midwifery code of ethics and professional guidelines to clinical practice
Understands role and responsibilities as patient advocate	Values role and responsibilities as patient advocate	Serves as a patient advocate

**Teaching/Learning Strategies:**

- Classroom presentations
- Group exercises – role plays
- Review of court cases
- Critique of newspaper articles
- Case studies and presentations
- Educational games
- Demonstration
- Coaching
- Homework and laboratory assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

**Instructional Materials:**

*Textbooks:*

Ethics, Law and Society, Volume II, Jennifer Gunning.

Ethics and Issues in Contemporary Nursing, Margaret A. Burkhardt and Alvita K. Nathaniel.

Kim Forrester, Debra Griffiths, 2010. Essentials of Law for Health Professionals, 3rd Edition

George D. Pozgar, 2009. Legal and Ethical Issues for Health Care Professionals

Resolving Ethical Dilemmas, A Guide for Clinicians, Bernard Lo.

Medical Ethics Manual, World Medical Association,  
[www.wma.net/ethicsunit/education.htm](http://www.wma.net/ethicsunit/education.htm)

Case Studies in Nursing Ethics, Robert M. Veatch and Sara T. Fry.

**Handouts:**

- Nurse Practice Act of Country



- Regional Regulatory Framework for Nurses
- ICN
- ICM
- By-Laws and Regulations, Liberian Board for Nursing and Midwifery and the Liberian Midwifery Association
- Nursing and Midwifery Practice ACT

**Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Fundamentals of Midwifery II

**Credits:**

4 hours

**Placement:**

Second semester of the first year

**Duration:**

56 hours classroom

168 laboratory & clinical hours

**Prerequisites:**

All First Semester Courses

**Introduction/Course Description:**

This course is a continuation of Fundamentals of midwifery I and will equip the student midwife in the practice of midwifery in a variety of situations and settings and for further professional education. It forms the basis for all other comprehensive and specialized health care throughout the program and will provide the basis for all future midwifery competencies for clinical care. In this course, the student learns to integrate interpersonal skills with clinical skills into midwifery care.

**Course Objectives:**

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

- Understand the importance of administering medication safely, including oxygen
- Manage common complications of surgery, especially in midwifery patients
- Manage patients with common disorders of elimination
- Apply skills in assisting in performing diagnostic and therapeutic procedures, including in obstetrics
- Manage clients needing first aid in emergency conditions, especially for obstetrical emergencies
- Apply knowledge and skills in providing emotional support and appropriate care for dying and death, including stillborn and immediate newborn death, as well as maternal death

**Specific Course Objectives:**

- Explain the principles and techniques of first aid
- Describe legal and ethical responsibilities for drug administration

- Identify three available sources of drug information.
- State factors involve in the administration of medications
- Name the checks and rights of medication administration
- Identify injection sites (SC, IM, I V)
- Demonstrate the administration of drugs
- Discuss complications of improper parental administration of drugs
- Demonstrate the administration of parental drugs, oral and topical medication safely and accurately
- Describe safety measures in administering oxygen
- Describe methods of oxygen administration
- Demonstrate correct administration of oxygen for therapy
- Describe commonly used drugs according to the National Formulary
- Classify the drugs according to the National Formulary
- List and explain responsibilities in assisting and preparing the patient for diagnostic and therapeutic procedures.
- Describe the clinical signs of approaching death.
- Describe care of the dying patient
- Describe ways to offer support to the dying patient and their family, including stillborn and immediate newborn death.
- Demonstrate the care of the dying patient
- Demonstrate care of the body after death, including caring for stillborn or newborn deaths.
- Describe midwife's responsibilities on reporting death and conducting maternal death audits.

### **Course Content:**

## **Unit I | Administration of Drugs**

- 1. LEGAL AND ETHICAL RESPONSIBILITIES FOR ADMINISTRATION OF DRUGS**
- 2. SOURCES OF DRUG INFORMATION**

**Semester II**

**3. FACTORS INVOLVED IN THE ADMINISTRATION OF MEDICATIONS:**

- Knowledge of the patient
- The ten rights
- Care of the drug

**4. FORMS OF DRUGS:**

- Liquids
- Cream
- Solids
- Powders
- Tablets
- Capsules

**5. TECHNIQUES FOR DRUG ADMINISTRATION:**

- Dispensing drugs
- Name of drugs
- Route of administration
- Quantity and interval to take the drug
- Sterile technique of drawing up medication (lab component)

**6. MEDICATIONS ORDERS:**

- Abbreviations used in medication order:
- Stat
- Standing order
- Single order
- PRN (whenever necessary)

**7. RECORDING, ADMINISTRATION AND TRANSCRIBING DRUG ORDER:**

- Drug dosage
- Calculation and conversion tables

- Preparing medication card or carder cards
- Charting of drug administration
- Educating patient about home use of prescribed medication

**8. ROUTES AND TECHNIQUES FOR ADMINISTERING DRUGS:**

- Oral
- Rectal
- Vaginal
- Topical
- Intramuscular
- Intravenous
- Subcutaneous - Insulin administration
- Intradermal
- Inhalants-Respiratory route—anesthetics and bronchodilators

**9. TRANSFUSION/BLOOD TRANSFUSIONCOMPLICATIONS OF DRUG ADMINISTRATION:**

- Major nerve damage
- Blood vessel damage:
  - Paralysis
  - Abscess
  - Cellulitis
  - Embolism

**10. REVIEW COMMONLY USED DRUGS IN LIBERIA: (AN OVERVIEW: SEE PHARMACOLOGY):**

- Anesthetic
- Analgesics
- Anti-allergens
- Anticonvulsants

## Semester II

- Anthelmintics
- Anti-amebics
- Anti-bacterials
- Anti-leprosy
- Anti-fungals
- Anti-tuberculosis
- Anti-filarial
- Anti-schistosomal
- Anti-septics
- Blood products and substitutes
- Cardiovascular
- Anti-arrhythmics
- Antihypotensive drugs used in anaphylaxis
- Antihypertensive drugs
- Dermatologicals
- Diuretics
- Gastrointestinal:
  - Antacids
  - Antiemetics

## Unit II | Caring for the Surgical Patient

### 1. MIDWIFERY AND SURGICAL CARE:

- Classification of surgery
- Common obstetrical surgical conditions-Caesarean section

### 2. PRE-OPERATIVE PHASE:

- Care:
  - Emotional support

- Physical assessment
- Risk factors
- Diagnostic screening
- Preoperative teaching:
  - Ventilatory function
  - Physical functional capacity
  - Sense of wellbeing
  - Length of hospital

### **3. PHYSICAL PREPARATION:**

- Fluid and electrolyte balance
- Prevention of infection
- Wound healing
- Bladder incontinence
- Rest and comfort
- Operative Phase/Day of Surgery
- Medical records
- Vital signs
- Hygiene
- Hair and cosmetics
- Removal of prostheses
- Bowel and bladder
- Transportation to the operating theater intraoperative:
  - Members of the surgical team
  - Anesthesia in surgery
- Types of anesthesia:
  - General
  - Muscle relaxants

## Semester II

- Local

### **4. CARE DURING SURGERY:**

- Providing emotional care
- Assisting with patient positioning
- Maintaining surgical asepsis
- Preventing patient heat loss
- Monitoring for malignant hyperthermia
- Assisting with surgical wound closure
- Transporting patient to post anesthesia or intensive care unit

### **5. POST-OPERATIVE PHASE:**

- Immediate post-op care
- Pain control/relief
- Other post-op discomfort
- Drains and drainage
- ICU
- Admission
- Immediate baseline assessment
- Assessment and intervention for immediate post-operative complications
- Discharge from ICU
- On Clinical Unit
- Assessment
- Establishment of goals
- Restoring homeostasis and preventing complications
- Maintaining and promoting adequate airway and respiratory function
- Plus all other nursing/ Midwifery care



## Unit III | Elimination Gastrointestinal Tract/Bowel

### 1. PRINCIPLES OF NORMAL BOWEL ELIMINATION:

- Characteristics of normal stool and defecation
- Common disorders of the G.I. Tract with surgery:
  - Intestinal gas
  - Constipation
  - Diarrhea
  - Fecal impaction
  - Anal incontinence

### 2. COMMON MEASURES FOR DEALING WITH PROBLEMS OF INTESTINAL ELIMINATION AFTER SURGERY:

- Gastric lavage
- Cathartics
- Suppository
- Enemas (type)
- Rectal tubes and suppository
- Manual removal of feces
- Adequate fluid intake
- High fiber diet

### 3. URINARY TRACT/BLADDER:

- Characteristics of normal urinary elimination

### 4. FACTORS CAUSING DISORDERS OF URINARY TRACT:

- Psychological or emotional
- Disease
- Medications

### 5. COMMON DISORDERS OF URINARY TRACT:

- Retention

## Semester II

- Incontinence
- Urgency
- UTI

### **6. COMMON MEASURES FOR DEALING WITH PROBLEMS OF URINARY ELIMINATION AFTER SURGERY:**

- Positioning patient
- Fluid intake and output
- Catheterization of male and female
- Indwelling catheter
- Bladder stimulation
- Bladder irrigation

## **Unit IV | Diagnostic and Therapeutic Procedures**

### **1. COLLECTION OF SPECIMEN:**

- Proper labeling of containers
- Proper handling of specimen
- Types of specimen:
  - Urine
  - Stool
  - Spinal fluid
  - Discharge from body
  - Sputum
  - Blood

### **2. ASSISTING AND PREPARING PATIENT FOR DIAGNOSTIC AND THERAPEUTIC PROCEDURES:**

- Lumbar puncture
- Thoracentesis
- Paracentesis

- Gastric and duodenal suctioning, etc.
- Vaginal exam
- Rectal exam
- Preparation for lab and x-ray

## **Unit V | Oxygen Administration**

- 1. SAFETY MEASURES IN ADMINISTERING OXYGEN—NOTE DANGERS OF OXYGEN USE**
- 2. METHODS OF OXYGEN ADMINISTRATION:**
  - Nasal cannula
  - Nasal catheter
  - Transtracheal oxygen
  - Oxygen mask
  - Home oxygen

## **Unit VI | Steam Therapy**

- Cold
- Hot

## **Unit VII | Process of Wound Healing**

- Stages of wound healing
- Cleaning and dressing
- Debridement
- Bandaging and binders
- Complications

## **Unit VIII | First Aid and Emergency Care and Procedure**

- Primary Survey and CPR, Airway obstruction

## **Semester II**

- Shock
- External and Internal Bleeding
- Fractures
- Soft Tissue Injuries
- Poisonings, Stings, and Bites
- Operation Room Care:
  - Preoperative Care
  - Intra-operative Care
  - Postoperative Care
- Surgical Dressings:
  - Classification
  - Inflammation and infection
  - General treatment of inflammation and infection
  - Wound healing
  - Purpose of surgical dressing

## **Unit IX | Death and Dying**

### **1. PERSPECTIVES ON DEATH AND DYING:**

- Meaning of death
- Theories of dying
- Signs of approaching death

### **2. DEALING WITH FEELINGS ON DEATH DURING STAGES OF GRIEVING**

### **3. CARE OF DYING PATIENT:**

- Maternal death
- Newborn
- Stillbirth

**4. SUPPORT OF THE DYING PATIENT'S (MATERNAL, NEWBORN , STILL BIRTH)FAMILY:**

- Counseling
- Emotional/psychological support

**5. MEETING THE NEEDS OF THE DYING PATIENT:**

- Physiological needs:
  - Personal hygiene
  - Pain control
  - Nutritional and fluid needs
  - Movement
  - Elimination
  - Respiratory care
- Psychological need
- Spiritual need

**6. CARE OF THE BODY AFTER DEATH (POST-MORTEM CARE) (MATERNAL, NEWBORN AND STILLBIRTH)**

**7. RESPONSIBILITIES IN REPORTING DEATH:**

- Doctor
- Forms
- Charting
- Midwife role in Maternal and newborn death
- Conducting and reporting maternal and newborn death audits

# Fundamentals of Midwifery II (Clinical)

## **Clinical Course Description:**

The clinical component of this course is intended to continue providing opportunities for the student to gain competency in providing care for patients. The student will progress to more complex skills than was experienced in fundamentals of midwifery I.

## **Clinical Objectives:**

On completion of this clinical course, the learners will be able to:

- Admit operative patients
- Build a working relationship with individuals and families with regard to self-care
- Demonstrate safe practice while providing care to patients
- Provide for physical safety of patients
- Protect patient from emotional harm
- Seek assistance from instructor or other healthcare member for care which is beyond the learner's level of knowledge or experience
- Plan and carry out health teaching for surgical patients
- Provide care and emotional support to dying patients and their grieving relatives
- Demonstrate cultural sensitivity when caring for the dead and for grieving relatives

## **Clinical Placements:**

- General wards (mainly surgical)
- Laboratory

## **Practical Skills:**

- Administering ordered drugs
- Documenting drug administration activities
- Admitting pre and post-operative patients
- Measuring and recording intake and output
- Interpreting vital sign readings
- Physical assessment of operative patients
- Developing and implementing Care Plans for surgical patients

- Moving, lifting and positioning surgical patients
- Helping patients maintain hygiene
- Serving meals
- Feeding clients
- Inserting naso-gastric tube
- Administering Oxygen
- Suctioning surgical patients
- Bandaging
- Dressing surgical wounds
- Splinting
- Making patient airway patent
- Cardiac massage
- Passing tube for flatus
- Transferring and discharging procedures
- Preparing and transferring a body to the morgue

### Competencies

Knowledge	Attitudes/Behaviors	Skills
Recognizes use of essential components of midwifery process appropriate to individual, family and group health care needs across the life span	Values use of scientific inquiry, as demonstrated in the midwifery process, as an essential tool for provision of care	Provides priority based care to individuals, families and groups through independent and collaborative application of the process Demonstrates cognitive, affective and psychomotor skills when delivering patient care
Understands the unique role of midwives in the provision of patient care Understands ethical principles, values, concepts and decision-making that apply to midwifery and patient care	Shows initiative for new ideas and actions to improve patient care Values the application of ethical principles in daily practice	Advocates for the role of the midwife as a member of the profession and health care team Incorporates Code of Ethics into daily practice Identifies and responds to ethical concerns, issues and dilemmas that affect midwifery practice

## Semester II

Knowledge	Attitudes/Behaviors	Skills
		Recognizes ethical problems and enlists system resources in resolving ethical issues in daily practice
Identifies leadership skills essential to the practice of midwifery Understands the roles and skills of the health care team.	Recognizes the role of the midwife as leader Recognizes the limits of one's own role and competence and, where necessary, consults with other health professionals with the appropriate competencies Values new ideas and interventions to improve patient care	Applies leadership responsibilities to meet patient needs Treats others with respect, trust, and dignity

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### Teaching/Learning Strategies:

- Classroom presentations
- Group exercises
- Educational games
- Demonstration
- Coaching
- Homework and laboratory assignments

### Course Expectations:

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

### Required Resources:

- Library
- Skill Lab Internet
- Blackboard/flipchart
- Notebook/handout



**Assessment:**

- Formative assessment
- Demonstrations
- Workbook
- Logbook
- Written examinations
- Clinical care plans
- OSCE

**Summative assessment:**

- Clinical Skills Examination

**References:**

- Sanoski, C., and Vallerand, A. (2012). *Davis's drug guide for nurses*. (13th Ed.). Philadelphia: F. A. Davis Co.
- Doenges, M., Moorhouse, M., and Murr, A. (2010). *Nurses pocket guide: Diagnoses, prioritized interventions and rationales*. (12th Ed.). Philadelphia: F. A. Davis Co.
- Lynn, P. (2011). *Taylor's clinical nursing skills: A nursing process approach*. (3rd Ed.). Philadelphia: Lippincott, Williams, Wilkins, & Wolters Kluwer.
- Smeltzer, S., Bare, B., Hinkle, J., and Cheever, K. (2010). *Brunner and Suddarth's textbook of medical-surgical nursing*. (12th Ed.). Philadelphia: Lippincott, Williams, Wilkins, & Wolters Kluwer.
- Taylor, C., Lillis, C., Lemone, P., and Lynn, P. (2011). *Fundamentals of nursing*. (7th Ed.). Philadelphia: Lippincott, Williams, Wilkins, & Wolters Kluwer.
- Van Leeuwen, A. And Poelhuis-Leth, D., (2011). *Davis's comprehensive handbook of laboratory and diagnostic tests with nursing implications*. (4th Ed.). Philadelphia: F. A. Davis Co.
- Venes, D., (2009). *Taber's cyclopedic medical dictionary*. (21st Ed.). Philadelphia: F. A. Davis Co.
- Jhpiego Infection Prevention Manual.
- Evans-smith, Pamela. *Taylor's Clinical Nursing Skills: A Nursing Process Approach*. Lippincott, Williams and Wilking, Philadelphia. 2005
- Potter, Patricia, and Perry, Anne Griffin. *Basic Nursing: Essentials of Practice*, Mosby, 2003.
- Taylor, Carol. *Fundamentals of Nursing: the Art and Science of Nursing Care*. Lippincott, Williams, and Wilkins. Philadelphia. 2001.

# Course Title: Anatomy and Physiology II

**Credits:**

3

**Placement:**

First year – Semester II

**Duration:**

16 weeks (14 instructional and 2 for exams)

42 classroom hours

42 lab hours

**Pre-requisites:**

English Communication Skills, Basic Math, Fundamentals of midwifery I, Anatomy and Physiology I, Integrated Basic Sciences, Primary Health Care I

**Course Description:**

This course is a continuation of anatomy and physiology I. It is designed to provide an in depth information so as to enabled the students gain increase knowledge and skills especially of those systems that play major roles in pregnancy, labor, and delivery, so as to strengthen midwifery management of the patient.

**Broad Objectives:**

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

- Relate in more depth the normal physiological functions of each organ
- Understand the malfunctions of organs due to selected conditions in Pregnancy, labor and delivery
- Relate symptoms and physical findings during pregnancy, labor and delivery to specific organs on the basis of anatomic locations
- Discuss the relationship of the structures and functions of the organ systems relative to pregnancy, labor, and delivery.
- Develop a scientific basis upon which to better connect and understand clinical findings in a pregnant or labor patient

**Specific Objectives:**

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

- List the steps of cellular division.
- Name the organs and valves (in order) in the pulmonary circulatory pathway of the cardiovascular system

- Name the organs and valves (in order) in the systemic circulatory pathway of the C-V system
- State how oxygen gets from the blood into the cells in the various organs of the body
- Discuss how carbon dioxide, formed in the cells, is transported and finally excreted from the body
- State how oxygen is carried from the lungs to the capillaries of the body
- Describe the differences in sodium and potassium concentrations in the intracellular and extracellular fluids
- Explain the importance of adequate circulation in the maintenance of pregnancy
- For each digestive juice, name the organ making it and the digestive enzymes it contains
- Name five functions of the liver
- Name three functions of the kidneys
- Name each endocrine gland and all of the hormones which the student was taught that each secretes
- Discuss the roles of placental hormones during pregnancy
- State where the brain's speech center is located
- State the functions of the cerebellum
- State the functions of the medulla oblongata
- Describe the differences in the function of afferent and efferent peripheral nerve fibers
- State why ova and sperm cells are haploid in chromosomes
- State two locations where smooth muscle cells are found
- State three differences in striated cardiac muscle and striated muscle in the limbs
- State how calcium is absorbed and regulated in the body
- State how skin regulates temperature during hot days and cool days
- For each system, list the number of illnesses requested below and describe them in the assessment and management of a childbearing mother:
  - Cardiovascular and Respiratory
  - Gastrointestinal – 10

## Semester II

- Lymphatic – 2
- Urinary – 5
- Endocrine – 1 illness for each of 6 (of the 8) glands
- Nervous system – 4
- Reproductive – 3
- Muscular system – 2
- Skeletal system – 4
- Integumentary – 5.

### Course Content:

#### 1. CELLS – THE BASIC UNIT OF ALL LIVING ORGANISMS:

- Life, cells and body systems
- Cell functions
- Cell components
- Mitosis and meiosis (cell division)

#### 2. CIRCULATORY SYSTEM:

- Pulmonary circulation – pathway-RV-PV-PA-Lung capillaries-PV-LA-MV-LV
- Lung respiration:
  - Function of alveoli and lung capillaries
  - Exchange of O<sub>2</sub> and CO<sub>2</sub> in lungs
  - Function of Hgb in carrying and releasing O<sub>2</sub> and CO<sub>2</sub>
  - Systemic circulatory pathway – LV-AV-aorta-smaller arteries-body capillaries-veins-SVC & IVC-RA-TV-RV
- Body cell respiration:
  - Dissociation of oxygen from Hgb in systemic capillaries
  - Oxygenation of glucose in cell mitochondria:
  - Produces water and carbon dioxide
  - Stores energy by turning ADP to ATP

- Blood:
  - Major blood types – A, B, AB, O
  - Transfusion reactions
  - RH factors
  - RH incompatibility and neonatal jaundice
  - Normal red blood cells
  - Abnormal RBCs – sickle cell anemia and thalassemia
  - Platelets and clotting factors
  - Depletion of clotting mechanisms, such as in DIC and abruptio placenta
  - White blood cells—types, functions, normal ranges
  - Neutrophils
  - Lymphocytes
  - Monocytes
  - Eosinophils
  - Basophils
- Anemias:
  - Iron deficiency anemia
  - B-12 and folate deficiency
  - Anemia from blood loss – as in hookworm (a type of Fe deficiency)
  - Hemolytic anemias
  - Sicklemia (discussed previously, but review)
  - Recessive condition-patient must have 2 genes for Sicklemia-ss (A represents the gene for normal RBCs & s the gene for Sicklemia)
  - Both parents must at least be carriers (As) or have Sickle Cell Anemia (ss)
  - Carriers (As) do not have any symptoms unless at times with low oxygen (such as at very high altitudes) or extreme exercise
  - If 2 carriers marry, on the average 1 in 4 children will have Sicklemia
- Pathology
- Fetal Circulation—different from circulation after birth

## Semester II

- Obviously fetus cannot get oxygen from breathing air
- Gets O<sub>2</sub> and gets rid of CO<sub>2</sub> through exchange with mother's circulation through the placenta
- No need for blood to go through fetal lungs, therefore:
  - Blood from right atrium shunted to left atrium through foramen ovale
  - Blood from rt. ventricle goes through pulmonary artery but shunted to aorta through patent ductus arteriosus instead of going through lungs
  - Upon birth foramen ovale and ductus arteriosus close when baby starts to breathe and blood from right ventricle goes through pulmonary artery through lungs.
- Congenital cardiac defects:
  - Ventricular septal defect
  - Atrial septal defect (patent foramen ovale)
  - Tetralogy of fallow
  - Patent ductus arteriosis

### 3. MUSCULAR SYSTEM:

- Types and names of muscles
- Components of muscle cells
- Muscular functions
- Purpose-movement
- Common diseases during pregnancy, labor and delivery

### 4. LYMPHATIC SYSTEM AND BODY FLUIDS:

- Lymph nodes – definition and locations
- Functions of nodes
- Lymphatic fluid – composition, etc.
- Fluids and electrolytes, and fluid compartments of the body:
  - The three compartments
  - Fluid composition of each (different electrolytes and their concentrations)
  - Fluid buffering systems, fluid pH

- Homeostasis
  - Common diseases during pregnancy, labor and delivery
- 5. RESPIRATORY SYSTEM:**
- Organs and functions – nose, pharynx, larynx, trachea; lungs with bronchial tubes, bronchioles, and alveoli
  - Air composition
  - Mechanics of respiration
  - Gaseous exchange of oxygen and carbon dioxide:
    - Alveolar level in lungs
    - Cellular level
  - Common diseases during pregnancy, labor and delivery
- 6. GASTROINTESTINAL SYSTEM:**
- Organs – mouth, pharynx, esophagus, stomach, duodenum, small and large intestines
  - Glands/organs supplying the system – salivary gland, pancreas, liver, intestinal wall glands
  - Physiological function of each organ of the system
  - Common diseases during pregnancy, labor and delivery
- 7. URINARY SYSTEM:**
- Organs - kidney, ureters, urethra, bladder
  - Effects of pregnancy, labor and delivery
- 8. REPRODUCTIVE SYSTEM:**
- Female Reproductive System:
    - Changes during pregnancy, labor or delivery
  - Common diseases during pregnancy, labor and delivery
  - Male Reproductive System

## 9. ENDOCRINE SYSTEM:

- Glands:
  - Pituitary
  - Thyroid
  - Parathyroid
  - Ovaries
  - Pancreas
  - Adrenal
- Hormones:
  - Estrogen
  - Progesterone
  - Chorionic gonadotropins
  - Relaxin
  - Antidiuretic
  - Oxytocin
  - Epinephrine(adrenaline)
  - Norepinephrine
  - Testosterone
- Common diseases during pregnancy, labor and delivery

## 10. NERVOUS SYSTEM:

- Central nervous system:
  - Brain - parts and functions
  - Spinal cord
- Peripheral nervous system:
  - Autonomic nervous system:
    - Sympathetic
    - Parasympathetic
- Common diseases during pregnancy, labor and delivery



**11. SKELETAL SYSTEM – THE BONES THAT GIVE THE BODY STRUCTURE AND SHAPE:**

- Composition of bone
- Types of bones
- Functions of bone:
  - Pelvis- associated with pregnancy, labor and delivery
- Common problems during pregnancy, labor and delivery

**12. INTEGUMENTARY SYSTEM:**

- Parts: skin, nails, hair
- Function
- Common problems during pregnancy, labor and delivery

# Anatomy and Physiology II Clinical Description

## **Clinical Course Description:**

This clinical course provides the learner with further opportunities to enhance his/her basic assessment skills. It gives the learner an opportunity to carry out direct observation on simulators and models in the midwifery arts laboratory to develop relevant knowledge in knowing how the human body works. The practicum allows for collaboration and consultations with the instructor and members of the class.

## **Clinical Objectives:**

- List the various body systems
- Explain how each body system functions
- Assess patients for body systems' disorders
- Manage patients with disorders of body systems
- Perform accurately, CPR skills on a patient

## **Clinical Placement:**

- Clinical skills laboratory

## **Clinical Skills:**

- Identifying normal body organs related to specific system
- Assessing patients for body system disorders Documenting findings from assessment
- Applying Cardio-pulmonary resuscitation techniques
- Transporting of injured patients

## **Resources/materials:**

- Anatomical models
- Lab Coats
- Gloves
- Microscopes

**Competencies**

Knowledge	Attitude/Behavior	Skills
Physical, biological, quantitative and computer sciences	Values liberal learning as a solid foundation for the development of the clinical judgment skills required for the practice of professional midwifery and critical thinking	Integrates concepts from behavioral, biological, and natural sciences in order to understand self and others  Interprets and uses quantitative data  Uses the scientific process and scientific data as a basis for developing, implementing, and evaluating interventions
Illness and disease management	Values a concern for the wellbeing of others (altruism)	Assesses and manages physical and psychological symptoms related to disease and treatment  Demonstrates sensitivity to personal and cultural influences on the individual's reactions to the illness experience and end of life  Maintains, restores and optimizes an individual's level of functioning  Anticipates and manages complications of disease progression  Anticipates, plans for, and manages physical, psychological, social, and spiritual needs of the patient and family/caregiver

**Teaching/Learning Strategy:**

- Lectures
- Discussions
- Case study
- Self-directed learning
- Reflective diaries

**Practical/Clinical Assessment:**

- Clinical Logs

## Semester II

- Clinical Practicum
- OSCE
- Case Presentations

### Assessment/Evaluation:

- Written Examinations
- Quizzes

### Instructional Materials:

#### *Textbooks:*

*Human Anatomy and Physiology*, 6th Ed., Elaine N. Marieb.

*Human Physiology*, 9th Ed., Stuart Ira Fox.

- Pictures and charts
- Models
- Handouts

### Course Expectations:

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

### Assessment Criteria—Standard Grading System: (modified for English)

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Midwifery I – Reproductive Health and Family Planning

**Credits:**

4

**Placement:**

Second semester of first year

**Duration:**

16 weeks (14 theory and 2 for exams)

56 hours classroom

168 Clinical hours

**Pre-requisites:**

Basic Math, Basic English, Fundamentals of Midwifery, Anatomy and Physiology I, Integrated Basic Sciences, Psychology and Sociology.

**Course Description:**

This is the first component of a four clinical midwifery course series. This course is designed to teach the student about sexual and reproductive health needs and rights of individuals, families and communities, including Family planning and adolescent sexual and reproductive health (ASRH), so as to prepare the student to provide FP counseling and service including provision of reproductive health care services for the adolescent. The course provides a foundational understanding of the principles of safe motherhood and EmONC.

**Course Objectives:**

Upon completion of this course, the student will:

- Understand the concepts of Reproductive health, including adolescent sexual and reproductive health (ASRH)
- Demonstrate ability to manage identified sexual and reproductive health needs of individuals, families, communities.
- Understand contraceptive technology and its importance to reproductive health.
- Explain the importance of Family Planning and the concept of Healthy Timing and Spacing of Pregnancy (HTSP)
- Have an understanding of the principles of safe motherhood and EmONC
- Provide high quality, culturally sensitive Reproductive health education, counseling and services to all in a variety of settings to all clients, including adolescence

## Semester II

### Specific Objectives:

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

- Describe factors affecting maternal and newborn mortality and morbidity related to problems due to childbirth
- Explain basic concepts related to reproductive health and adolescent health
- Identify problems adolescents face in obtaining health services and provide adolescent-friendly health services
- Describe contraceptive technology and its importance to reproductive health
- Counsel clients on all methods of family planning using the basic counseling strategies
- Apply skills in providing all methods of family planning depending on the client choice.
- Apply principles of communication, health education and counseling to the care of women seeking primary care and family planning services
- Recognize and appropriately refer women experiencing family planning complications
- Discuss the concept of safe motherhood and the millennium development goals
- Describe factors affecting maternal and newborn mortality and morbidity

### Course Content:

## Unit I | Maternal & Neonatal Mortality

### 1. SIGNIFICANCE OF THE PROBLEM

### 2. PRESENT RATE IN LIBERIA

### 3. MAJOR MEDICAL CAUSES

### 4. CONTRIBUTING FACTORS:

- Three Delays:
  - Delay in deciding to seek care
  - Delay in reaching care
  - Delay in receiving care

## Unit II | Reproductive Health/Family Planning

### 1. INTRODUCTION/OVERVIEW OF SEXUAL AND REPRODUCTIVE HEALTH:

- Reproductive health:
  - Description:
    - Sexual and reproductive health policy and guidelines
    - Sexual and Reproductive Health Services
    - Sexual and Reproductive Health Rights
    - Physiological Changes in adolescent
  - Components/concepts:
    - Women friendly services
    - Safe motherhood, including essential neonatal care(EmONC)
    - Family planning information and services
  - Adolescent Reproductive Health:
    - Description
    - Barriers:
      - Fear that their parents will find out
      - Difficulty negotiating condom use with male partners
      - Fear of violence from their partners
      - Concerns about side effects of birth control
      - Peer pressure to engage in sexual intercourse
      - Expectations for women to marry and begin childbearing at an early age.
    - Characteristic of Adolescent Friendly Reproductive Health Services:
      - Assurances of privacy and confidentiality: young people must feel confident that their important and sensitive concerns are not overheard or retold to other persons
      - Accurate, easy-to-understand information
      - Gender-specific information: service specifically for men and for women
      - Information addressing women's less equal power status in many relationships
      - Peer education and outreach
      - Activities to build skills in communication and negotiation
      - Involvement by youth in program design and operation
      - Free or affordable services

## Semester II

- Easy and confidential registration, and short waits
- Consultation with or without an appointment
- Treating adolescents with equal care and respect as other clients
- Encourage community and parental support
- Allowing young couples to come to the clinic together to seek services and be counseled
- Publicity so that adolescents know what services are offered at the clinic and must be aware that they will be treated respectfully and confidentially

## 2. FAMILY PLANNING AND HEALTH:

- History of family planning in Liberia
- Importance of family planning and improve health of mothers and children:
  - Problems caused by lack of family planning
  - Healthy Timing and Spacing of Pregnancy (HTSP)
  - The role of health/family planning education Family Planning Counseling-using Balance Counseling Strategy
- Contraceptive Technology and Methods of Family Planning:
  - Fertility Awareness Methods/Natural family planning:
    - Cycle beads
    - LAM
    - Condoms (male)
    - Condoms (female)
    - IUCDs
    - Implants/Jadelle
    - Hormonal
    - Emergency contraception
- Safe motherhood and the Millennium Development Goals (MDGs):
  - Millennium Development Goals (MDGs) (4 & 5)
  - Calculating perinatal statistics
  - History of midwifery in Liberia
  - Maternal Health in Liberia
  - A global perspective on midwifery



- International midwifery competencies and practice standards
- Regional midwifery competencies and practice standards

### **Unit III | Basic Midwifery Principles**

- Historical Background And Development Of Midwifery
- Current Trends And Issues In Midwifery Practice
- Midwifery Concepts, Theories And Models
- Midwifery Management Process

#### **1. MIDWIVES AS A PRIMARY CARE PROVIDER:**

- Common Terminology Used In Midwifery Care
- The Importance Of Preconception Care
- Screening For Complications

# Clinical Practice: Midwifery I

## Clinical Course Description:

This course is designed to equip the learner to prevent preconception and prenatal exposures to environmental hazards and to promote prevention-oriented policies in sexual reproductive health.

## Clinical Objectives:

- Apply newly acquired knowledge, attitudes, and skills when diagnosing and treating patients of all ages for reproductive and sexual health conditions
- Translate and integrate evidence-based reproductive and sexual health research into their clinical setting
- Apply effective communication and counseling skills on reproductive and sexual health conditions and treatment options
- Integrate an awareness of current social, political, and legal issues affecting reproductive and sexual health care into clinical practice

## Clinical Placement:

- Obstetric Ward
- Female Ward
- Community Health Department
- Sexual and Reproductive Health Clinic
- Out Patient Clinic

## Clinical Skills:

- Assessment using the midwifery care process
- Documentation
- Health Assessment
- Counseling

## Resources:

- Female pelvic anatomy
- The sexual response cycle
- Neurobiologic etiology of sexual problems

## Competencies

Knowledge	Attitudes/Behaviors	Skills
Identifies human factors and basic sexual and reproductive health policies and guidelines	Recognises the SRHR of individuals, families and communities  Designs acceptable health education strategies for promotion of SRHR	Demonstrates effective use of policies and guidelines for better SRHR  Encourages the respect of SRHR among groups  Uses all appropriate strategies to assist individuals, families and communities for positive SRHR
Describe benefits and limitations of policies and guidelines on SRHR	Recognises resistance to aspects of SRHR from individuals, families and communities	Demonstrates effective use of strategies for individuals, families and communities in overcoming resistance
Discusses effective strategies to enhance health promotion, prevent disease and assist recovery following SRHR diseases	Recognises that individuals , families and communities are vulnerable to SRHR health diseases  Recognises that the diseases processes have serious health implications to reproduction  Recognises that socio-cultural, economic, spiritual and psychosocial forces have a bearing on SRHR diseases	Uses acceptable norms to discuss vulnerability and implications  Participates in the health team in caring for SRHR diseases  Demonstrate extra care of client by in-depth interviewing and identification of associating factors to the cause of disease
Describe possible avenues for curbing SRHR diseases  Describe how individuals, families, communities and health care team can contribute to promoting SRHR	Recognises the complexity and sensitivity of midwifery care of SRHR diseases	Use positive areas of policies and guidelines for educating individuals, families and communities for better SRHR  Utilises available data (positive and negative) to assist stakeholders make informed decisions on SRHR

### Teaching/Learning Strategies:

- Classroom presentations
- Case studies
- Role plays
- Group exercises
- Educational games
- Demonstration and return demonstration

## Semester II

- Coaching/feedback
- Homework and laboratory assignments

### Course Expectations:

- Regularly attend classroom and laboratory sessions
- Complete all clinical hours
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class, laboratory and clinical practicum
- Complete all assignments and examinations on due dates

### References:

*Contraceptive Technology*, 19th Ed., R. Hatcher, 2007.

Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs and World Health Organization Family Planning: *A Global Handbook for Providers*, 2007.

*Midwifery: Preparation and Practice*, S. Pairman, J. Pincombe, C. Thorogood, S. Trace, 2006.

*Varney's Midwifery*, 4th Ed., H. Varney, 2004

*Draft Sexual and Reproductive Health Competencies*, WHO, 2009.

*Interdisciplinary Procedure Manual Liberia* 2012

American Association of Sexuality Educators Counselors and Therapists  
([www.aasect.org](http://www.aasect.org))

American College of Obstetricians and Gynecologists  
([www.acog.org/publications/patient\\_education/](http://www.acog.org/publications/patient_education/))

ARHP Sex and Sexuality Reproductive Health Topic Area ([www.arhp.org/Topics/Sex-and-Sexuality](http://www.arhp.org/Topics/Sex-and-Sexuality))

International Society for the Study of Women's Sexual Health ([www.isswsh.org](http://www.isswsh.org))

North American Menopause Society ([www.menopause.org](http://www.menopause.org))

### Assessment Criteria— Standard Grading System:

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Pharmacology and Drug Calculations

**Credits:**

4

**Placement:**

Second Semester of First Year

**Duration:**

16 Weeks (14 instructional and 2 exams)

56 hours classroom

**Introduction/Course Description:**

This course will equip the learner with the knowledge, skills and attitude necessary for safe administration of medicines. Emphasis will be on classification, storage, calculation and side effects of medicines and will also provide the basis for accurate dosage calculation and drug administration to pregnant, labor and delivery clients, as well as, for paediatric, adult and geriatric patients in various health settings. The course will also teach students to identify drugs according to classes and how each class affects various body systems.

**General Objectives:**

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

- Discuss the pharmacological principles of drugs as they relate to the calculation and administration of drugs.
- Understand pharmacokinetics, pharmacodynamics, pharmaco-therapeutics and adverse effects of medicines on clients of all ages.
- Calculate dosages correctly based on age and weight of patients.
- Demonstrate understanding of contra-indications and adverse effects of medicines before and during administration.
- Display knowledge of pertinent considerations when storing, and administering medicines.

**Specific Objectives:**

At the end of this course the students will be able to:

- List the rights and errors associated with medication administration
- State the sources of drugs and give specific examples
- Demonstrate effective dosage calculations using various formulas

## Semester II

- Describe the various mechanisms of drug actions
- Discuss factors that influence drug action
- Explain the various adverse responses to drugs
- Explain the advantages and disadvantages of self-medication
- Discuss the classification and mechanism of action of antimicrobial agents
- List and explain the problems associated with antimicrobial therapies
- Identify and discuss the types and functions of serum and vaccines
- List and explain the classification of vitamins and their function
- Discuss the importance of minerals on various body systems
- Identify the various classes of drugs along with the indications, actions, side effects, contra-indications and implications of drugs used in treating cardiovascular disorders
- Describe the route of administration action, desired effects, implications and contra-indications of various classes of drugs affecting the respiratory system
- Describe the route of administration, actions, desired effects, implications and contra-indications of drugs use in the treatment of metabolic and endocrine disorders
- Identify drugs used in the treatment of metabolic and endocrine disorders
- Describe the route of administration, actions, desired effects, implications and contra-indications of various drugs that affect the reproductive systems

### Course Content:

## Unit 1 | Introduction to Pharmacology

### 1. COMMON TERMINOLOGIES

### 2. MEDICINES CONTROL LEGISLATION

### 3. NOMENCLATURE FOR MEDICINES:

- Chemical name
- Generic name
- Trade name

## **Unit 2 | Preparation and Classification of Medicines**

- 1. PREPARATION OF MEDICINES**
- 2. CLASSIFICATION OF MEDICATIONS**
- 3. DOSAGE CALCULATION FOR MEDICINES**
- 4. STORAGE, PREPARATION AND ADMINISTRATION OF MEDICINES**

## **Unit 3 | Drug Administration Management**

### **1. QUALITY AND SAFETY IN DRUG THERAPY – THE MIDWIFE’S RESPONSIBILITY:**

- The five rights
- Systematic prevention of drug errors
- Communication with prescribing health care provider and pharmacist
- Drug calculations (laboratory component)

### **2. DRUG FORMULATIONS (LABORATORY COMPONENT):**

- Suspensions
- Mixture
- Emulsion
- Syrup
- Pills
- Capsules
- Extended release formulations

### **3. SOURCES OF DRUGS:**

- Animals
- Minerals
- Chemical
- Plants

## Semester II

### 4. DRUG STANDARDS:

- National Formulary
- Purpose
- Over the counter drugs
- Herbals and biologics

### 5. DRUG LEGISLATION ABOUT THE DISPENSING AND USE OF DRUGS IN LIBERIA:

- Narcotic laws
- Testing new drugs

## Unit III | Drug Actions

### *Pharmacokinetics and Pharmacodynamics:*

#### 1. PHARMACOKINETICS:

- Absorption
- Metabolism
- Distribution
- Excretion

#### 2. PHARMACODYNAMICS:

- Drug-receptor interactions
- Drug responses that do not involve receptors
- The therapeutic index

#### 3. PHARMACOTHERAPEUTICS

#### 4. FACTORS INFLUENCING DRUG ACTION:

- Age
- Body weight
- Pathological conditions
- Diet



- Route
- Dosage
- Time of administration

#### **5. ADVERSE RESPONSE TO DRUGS:**

- Toxicity
- Drug allergy
- Tolerance
- Calculation
- Physical dependence
- Psychological dependence
- Drug interactions
- Pregnancy and breastfeeding

### **Unit IV | Psychological Aspects**

#### **1. PSYCHOLOGICAL ASPECT TO DRUG AND SELF-MEDICATION:**

- Placebo
- Symbolic meaning of drugs
- Effect of drug on the mind

#### **2. SELF-MEDICATION:**

- Advantages
- Disadvantages

#### **3. RESPONSIBILITY:**

- Teaching the public on the danger of drug misuse

### **Unit V | Classes of Medicines**

- Analgesics
- Anti-inflammatory

## Semester II

- Fluids and electrolytes
- Anti-convulsants
- Antihypertensive agents
- Anesthetics
- Muscarinic agonists and antagonists
- Anti-infective agents
- Anti-neoplastic agents
- Antidepressants and depressants
- Antipsychotic agents
- Sedatives and hypnotics
- Anti-diabetic agents
- Vitamins
- Antihistamines
- Anti-retroviral drugs

### 1. ANTIMICROBIAL THERAPY

### 2. SELECTIVE TOXICITY

### 3. CLASSIFICATION OF ANTIMICROBIALS:

- Broad spectrum versus narrow spectrum
- Bacteriostatic versus bactericidal
- Mechanism of action:
  - Drugs that weaken the bacterial cell wall
  - Drugs that inhibit bacterial protein synthesis
  - Drugs that inhibit synthesis of DNA or RNA or disrupt DNA function
  - Antimetabolites
  - Drugs that suppress viral replication
  - Classification by susceptible organism

**4. PROBLEMS WITH ANTIMICROBIAL THERAPIES:**

- Acquired resistance
- Super infection
- Allergic reaction
- Anaphylaxis

**5. SYSTEMIC ANTIBIOTICS; PHARMACOTHERAPEUTICS, PHARMACOKINETICS PHARMACODYNAMICS, CONTRAINDICATIONS, PRECAUTIONS, ADVERSE EFFECTS AND INTERACTIONS:**

- Penicillin
- Tetracycline
- Sulfonamides
- Chloramphenicol
- Antifungal drugs

**6. USE OF LOCAL ANTI-INFECTIVE DRUGS:**

- Drugs against cestodes and nematodes pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Drugs for shistosomiasis pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Drugs for amebiasis pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions

**Unit VI | Vaccines****1. INTRODUCTION:**

- Definition and function
- Laboratory component: practice interpreting immunization schedule, teaching families, administering and documenting immunizations

**2. TYPES THAT PRODUCE ACTIVE IMMUNITY:**

- I.V.
- BCG

## Semester II

- DTwPHibHep: diphtheria, tetanus, pertussis, haemophilus influenza B, hepatitis B, pneumococcal
- Rubella
- Yellow fever
- Oral polio vaccine

### 3. TYPES THAT PRODUCE PASSIVE IMMUNITY:

- Immunoglobulin
- Tetanus toxoid
- Antigen for diagnostic tests i.e., PPD

### 4. MINERALS, VITAMINS

- Electrolytes:
  - Potassium sodium calcium
  - Magnesium
  - Chloride

### 5. VITAMINS:

- Water soluble vitamins: B, C and B complex
- Fat soluble: A, D, E

## Unit VII | Drugs Affecting the Central Nervous System

### 1. INTRODUCTION TO CNS PHARMACOLOGY

### 2. DRUGS FOR PAIN:

- Opioids: pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Opioid antagonists: pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Non-steroidal anti-inflammatories (NSAIDs): pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions

- Acetaminophen: pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Adjuvants
- Local anaesthetics

### **3. ANTI-SEIZURE MEDICATIONS:**

- Therapeutic goals and patient adherence
- Phenytoin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Barbiturates: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- GABA enhancer: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Drugs for status epilepticus

### **4. PSYCHOTHERAPEUTIC DRUGS:**

- Anti-depressants:
  - Selective serotonin re-uptake inhibitors (fluoxetine): pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
  - Butropion: pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Mood-stabilizing drugs:
  - Lithium
  - GABA enhancers
- Anti-psychotics: general adverse effects:
  - Extra-pyramidal symptoms
  - Anti-cholinergic effects
  - Sedation
  - Orthostatic hypotension
  - CNS stimulants for attention deficit/hyperactivity disorder (ADD/ADHD)

### **5. DRUG ABUSE AND ITS MANAGEMENT**

## Unit VIII | Pharmacology of the Peripheral Nervous System

### 1. THE AUTONOMIC NERVOUS SYSTEM:

- Sympathetic And Parasympathetic Systems
- Agonists And Antagonists
- Regulation Of Functions Throughout The Body By The Ans
- Adrenergic Agonists
- Adrenergic Antagonists
- Anti-Cholinergics
- Cholinesterase Inhibitors:
- Non Barbiturate Sedatives And Hypnotics

## Unit IX | Drugs Affecting the Cardiovascular System

- Diuretics: furosemide; hydrochlorothiazide: pharmacotherapeutics, pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Anticholesterol drugs:
  - Statins: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Anti-coagulants:
  - Heparin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
  - Warfarin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
  - Aspirin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Cardiac glycosides:
  - Digoxin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions

## **Unit X | Drugs Affecting the Respiratory System**

### **1. INTRODUCTION – REVIEW ANATOMY AND PHYSIOLOGY OF THE RESPIRATORY SYSTEM**

#### **2. DRUG THERAPY FOR ASTHMA:**

- Severe, persistent asthma
- Acute exacerbations of asthma

## **Unit XI | Drugs for Endocrine Disorders**

### **1. DRUG THERAPY OF DIABETES MELLITUS TYPE 1:**

- Insulin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Teaching management of insulin therapy

### **2. DRUG THERAPY OF DM TYPE 2:**

- Oral hypoglycemic agents: metformin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Oral hypoglycemic agents – Glibenclamide (a sulfonurea): pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions

## **Unit XII | Drugs Affecting the Reproductive System**

### **1. ORAL CONTRACEPTIVES: PHARMACOKINETICS, PHARMACODYNAMICS, CONTRAINDICATIONS, PRECAUTIONS, ADVERSE EFFECTS AND INTERACTIONS**

### **2. OTHER CONTRACEPTIVE DELIVERY SYSTEMS**

### **3. DRUGS AFFECTING UTERINE FUNCTION:**

- Oxytocin: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Misoprostol: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions
- Magnesium sulfate: pharmacokinetics, pharmacodynamics, contraindications, precautions, adverse effects and interactions

## Unit XIII | Summary: Using Drug Information Resources (Lab 8 Hours Including Case Studies and Hands-on Activities Accessing Internet and Written Resources)

- Identification Of Drug Information Resources For Clinical Practice
- Recognition Of Ongoing Changes In Drug Therapies
- Responsibilities In Safe And Effective Drug Therapy

### Competencies

Knowledge	Attitudes/Behaviors	Skills
<p>Delineates general categories of errors and hazards in care</p> <p>Describes factors that create a culture of safety</p> <p>Describes optimal processes for communicating with patients/families experiencing adverse event</p>	<p>Recognizes the importance of transparency in communication with the patient, family, and health care team around safety and adverse events</p> <p>Recognizes the complexity and sensitivity of the clinical management of medical errors and adverse events</p>	<p>Participates in collecting and aggregating safety data</p> <p>Uses organizational error reporting system for “near miss” and error reporting</p> <p>Communicates observations or concerns related to hazards and errors involving patients, families, and/or health care team</p> <p>Utilizes timely data collection to facilitate effective transfer of patient care responsibilities to another professional during transitions in care (“hand-offs”)</p> <p>Discusses clinical scenarios in which sensitive and skillful management of corrective actions to reduce emotional trauma to patients/families is employed</p>
<p>Demonstrates knowledge of basic scientific methods and processes regarding the administration of medicines</p>	<p>Appreciates the strength of scientific bases for practice</p>	<p>Correctly and accurately administers medications</p>

### Teaching/Learning Strategies:

- Classroom presentations
- Group exercises
- Educational games
- Demonstration



- Coaching
- Homework and laboratory assignments

### **Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

### **References:**

Ministry of Health & Social Welfare, (2012). Essential medicines list for Liberia

Trounce, J. 2004. Clinical pharmacology for nurses, Churchill Richard A. Lehne, 2011. Pharmacology for nursing care; 7th edition

Sidney John Hopkins, 2005. Drug and Pharmacology for Nursing; 13th edition

Basic and Clinical Pharmacology, 6th Ed., G.B. Katzung, 2006.

Lehne, Richard A. (2007). Pharmacology for Nursing Care, 6th ed. Canada, Saunders/Elsevier, Inc.

### **Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%



# **Semester II | Course Outline**

**Health Assessment**

**Tropical & Communicable Disease**

**Primary Health Care/Community Health II - PHC II**

**Medical Care**

**Midwifery II**

**Emergency Health & Disaster Preparedness**



# Course Title: Health Assessment

**Credits:**

3

**Placement:**

First semester of second year

**Duration:**

16 Weeks (14 instructional and 2 exams)

42 hours classroom

42 hours laboratory

**Course Description:**

The course builds on the knowledge gained in fundamentals of midwifery, anatomy and physiology, the basic sciences, communication and ICT and provides the students with knowledge and skills in conducting a holistic assessment, including physical assessment skills, clinical examination techniques and patient teaching guidelines. This course provides the midwifery student an introduction to the skills of history taking, physical assessment techniques, patient teaching, and documentation, focusing on maternity patients. The student will acquire needed skills to conduct a comprehensive health assessment including the physical, psychological, social, functional, and environmental aspects of health, especially of midwifery patients and newborns. Emphasis is placed on the utilization of assessment findings for clinical decision making in midwifery.

**Course Objectives:**

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

- Conduct a comprehensive health history and physical assessment of a patient, taking into consideration physical, psychosocial, cultural, and spiritual dimensions with special focus on a maternity patient and newborns, and explain the significance of abnormal findings.
- Explain the importance of data and documentation in a comprehensive health assessment

**Specific Objectives:**

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

- Explain the rationale for health history questions.
- Obtain a comprehensive health history of a patient using therapeutic interviewing techniques taking into consideration psychosocial, cultural, spiritual dimensions
- Conduct a complete physical assessment of patients across the life span using appropriate technologies

### **Semester III**

- Demonstrate skills in conducting a health assessment of a pregnant woman, postpartum mother a newborn and a pediatric patient.
- Discuss gender/cultural/ethnic/racial variations found during the interview and physical assessment.
- Analyze and interpreting data gained from comprehensive health history for clinical decision making.
- Communicate assessment findings verbally and in writing.
- Accurately documenting data gathered from assessment.
- Utilize appropriate safety measures during physical assessment of client to minimize risk.

### **Course Content:**

#### **Unit I | Comprehensive Health History**

- Health history components
- Health history and documentation
- Assessment Modalities:
  - Effective Interviewing Techniques
  - Physical Assessment Techniques
- Technologies used in assessment
- Resources and equipment needed:
  - Weighing scales
  - Measuring tape line
  - Blood Pressure machine
  - Pulse oxy
  - Tuning Fork
  - Snelling Eye Chart
  - Hammer
  - Stethoscope
  - Tongue Blade
  - Ophthalmoscope

## **Unit II | Systematic Physical Assessment**

- Safety measures considered in health assessment
- Integumentary assessment-Skin, Hair And Nails
- HEENT/Neck Assessment- Eyes, Ears, Nose, Mouth And Throat, Head And Neck
- Cardiovascular assessment
- Chest pulmonary assessment-Chest, Thorax And Lungs
- Heart And Peripheral Vasculature
- Abdominal assessment
- Breasts And Regional Nodes assessment
- Male/female Genitalia/Anal/Rectal assessment
- Musculoskeletal assessment
- Neurological Assessment

## **Unit III | Assessment of Specialized Groups**

- Newborn assessment
- Pediatric assessment
- Geriatric assessment
- Pregnancy assessment
- Labor assessment
- Postpartum assessment

## **Unit IV | Investigations**

- Laboratory
- Radiological

## **Unit V | Other Assessment**

- Developmental Assessment

### **Semester III**

- Nutritional Assessment
- Mental Status And Neurological Techniques
- Rectal/Prostate Inspection/Palpation On A Healthy Adult
- Health Assessment in Domestic Violence

### **Unit VI | Documentation of Findings**



# Health Assessment Clinical Description

This clinical course provides the learner with an opportunity to enhance their basic midwifery clinical skills. The clinical gives the learner an opportunity to carry out assessment on patients and models in a simulation center and in a clinical setting on the wards and outpatient department to develop relevant skills. The practicum allows for collaboration and consultations with members of the health team.

## Clinical Objectives:

At the end of this course the student will be able to:

- Conduct a comprehensive health assessment of a patient using the assessment tool.
- Participate in the process of assessing, diagnosing, planning, implementing and evaluating factors which are directly and indirectly affecting an individual's health
- Accurately documenting data gathered from assessment.
- Assessing own strengths and weakness in the implementation of the midwifery process
- Collaborating with members of the health team for quality care.

## Clinical Placement:

- Wards
- Outpatients
- Clinical skills laboratory

## Clinical Skills:

- Weighing with scales
- Measuring with tape line
- Blood Pressure measurement
- Pulse reading
- Using:
  - Tuning Fork
  - Snellen Chart
  - Hammer
  - Stethoscope

### Semester III

- Tongue Blade
- Documentation of findings

### Resources:

- Bp Machine and Stethoscope
- Tuning fork
- Ophthalmoscope
- Tongue Blade
- Tape line

### Competencies

Knowledge	Attitudes/Behaviors	Skills
Demonstrates knowledge of basic scientific methods and processes	Appreciates strengths and weaknesses of scientific bases for practice  Values the need for ethical conduct in practice and research	Critiques research for application to practice  Participates in data collection and other research activities
Understands the use and importance of data for improving practice	Values the importance of midwifery	Describes the computerized systems presently utilized to facilitate patient care
Describes how diverse cultural, ethnic, spiritual and socioeconomic backgrounds function as sources of patient, family, and community values	Describes how diverse cultural, ethnic, spiritual and socioeconomic backgrounds function as sources of patient, family, and community values	Implement care to meet holistic needs of patient socioeconomic cultural, ethnic and spiritual values and beliefs influencing health care and practice
Describes scope of practice and roles of interdisciplinary and midwifery health care team members	Values the perspectives and expertise of all health team members	Functions competently within own scope of practice as a member of the health care team  Assumes the role of team member
Understands the use and importance of data for improving practice	Values the importance of data to improve midwifery practice	Individually, or as a member of a group, uses information effectively to accomplish a specific health care purpose  Uses information technology to enhance own knowledge

**Assessment/Evaluation:**

- Formative Assessment and Summative Assessment
- Theory evaluation
- Midterm
- Final Exam

**Clinical Evaluation:**

- Physical assessment and recording of findings including
- Work book assignments
- Health history, review of systems (ROS) and recording of data
- Practical assessment including OSCE for practical exams
- Performance Examination on all body systems

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**Teaching/Learning Strategies:**

- Classroom presentations
- Group exercises
- Educational games
- Demonstration
- Coaching
- Homework and laboratory assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

### Semester III

#### Required Resources:

- Hand outs
- Skills lab
- Anatomical modules

#### Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

#### References:

Carolyn Jarvis, 2011. Physical Examination & Health Assessment, 6th Edition

Carolyn Jarvis, 2011. Pocket book companion for Physical Examination & Health Assessment, 6th Edition

Carolyn Jarvis, 2011. Student Laboratory Manual for Physical Examination & Health Assessment, 6th Edition

Carolyn Jarvis, 2011. Vital Notes for Nurses: Health Assessment, 6th Edition

Anna Crouch and Clency Meurier 2005. Vital Notes for Nurses: Health Assessment (This is old but good.)

Inter-disciplinary Procedure Manual 2012

# Course Title: Tropical and Communicable Diseases

**Credits:**

3

**Placement:**

First Semester year 2 (third semester)

Duration: 16 Weeks (14 instructional and 2 exams)

42 Classroom hours

**Pre-requisites:**

All first and second semester courses

**Course Description:**

This course is designed to introduce the students to the components of common tropical and communicable diseases, including the parasitic diseases that are harmful to humans, and parasitology. This course will also assist the students in developing necessary knowledge and skills in parasitology and tropical diseases.

Emphasis is placed on their signs and symptoms, mode of transmission, prevention and management of the most common tropical and communicable diseases, including the parasitic diseases that are harmful to humans with special emphasis on Malaria, HIV/AIDS and TB.

**Broad Objectives:**

- Identify the common tropical and parasitic diseases with special emphasis on Malaria, HIV/AIDS and TB
- Understand the principles of prevention of selected tropical and communicable diseases, with emphasis on Malaria, TB and HIV and AIDS
- Properly manage selected tropical and communicable diseases including, malaria, TB, HIV&AIDS

**Specific Objectives:**

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

- Define related communicable disease terminologies
- Explain the three major principles of communicable disease control
- List and explain five preventive measures in communicable disease control in Liberia
- Discuss Burden of Malaria

### Semester III

- Define Malaria
- Explain the life cycle of Malaria
- List the types of Malaria Vectors in Liberia
- List the Malaria parasite Species in Liberia
- Discuss the population at risk of malaria
- Explain the Malaria Epidemiology and related Terminology
- Explain Clinical Assessment and Diagnosis of Uncomplicated Malaria
- Explain clinical Assessment and Diagnosis of Complicated Malaria
- List the Preventive Methods for Malaria
- List the steps for proper malaria case management
- Explain why self-diagnosis and clinical diagnosis may lead to treatment failure or recurring infection
- Describe the types of diagnostic tests available for malaria and their advantages and disadvantages
- Identify other causes of fever
- List the signs and symptoms of uncomplicated and severe malaria
- Describe the treatment for uncomplicated and complicated malaria
- Outline the process of malaria medication adherence counseling
- Review the process of pharmacovigilance
- List the three elements of malaria prevention and control according to the WHO malaria in pregnancy (MIP) strategy
- List the elements of counseling women about intermittent preventive treatment during pregnancy (IPTp) and other means of malaria prevention
- Describe the use of sulfadoxine-pyrimethamine (SP) for IPTp, including dosage, timing and contraindications
- Identify ways to prevent mosquito bites and breeding
- Describe the difference between untreated, treated and long-lasting nets
- Explain the rationale and organization of IRS programs
- List other mosquito control measures

- Describe the burden of malaria disease
- Define malaria and explain how it is transmitted
- List the effects of malaria on pregnant women and their unborn babies
- Describe the effects of malaria on pregnant women with HIV/AIDS
- List at least six other protozoal diseases
- Identify the causative agents of the following diseases using microscope in the laboratory:
  - Black water fever
  - Trypanosomiasis (if available)
  - Amebiasis
  - Giardiasis
  - Leishmaniasis
  - Trichanomiasis
  - Schistosomiasis
  - Tapeworm
  - Elephantiasis
  - Onchocerciasis
- Describe the epidemiology of TB & HIV in Liberia, regionally, and globally
- Discuss collaborative TB/HIV activities
- Explain the roles of NLTCP and NACP in relation to collaborative TB/HIV activities
- Describe the transmission and natural progression of TB
- Describe extra-pulmonary manifestations of TB
- Describe the hierarchy of infection control
- Define HIV and AIDS
- Discuss modes of HIV transmission
- Describe how the HIV virus interacts with the human immune system
- Explain progression of HIV infection
- Explain the diagnosis of HIV and TB in adults and children

### Semester III

- Define active and passive case finding in both diseases
- Explain the importance of providing HIV testing to TB patients (DCT)
- Describe the different approaches of HIV counseling and testing in Liberia
- Differentiate between VCT and PICT
- Explain the importance of providing HIV testing to TB patients (DCT)
- Identify the basic communication and counseling skills used in PICT
- Demonstrate effective communication skills in PICT
- Clinically stage adults and children living with HIV
- Describe diagnosis and management of common and serious opportunistic infections
- Treat TB using the appropriate regimen for the appropriate category of TB patient
- Identify the regimens & different actions of TB drugs
- Describe the Directly Observed Treatment Short Course (DOTS) Strategy
- Describe strategies for adherence to treatment
- Describe when to initiate cotrimoxazole prophylaxis for malaria prevention (IPT)
- Describe INH Preventive Therapy (IPT)
- Discuss how antiretrovirals work
- Review the current first line regimens
- Determine when to initiate ART and what regimens to use
- Review the regimens used in patients with TB and HIV
- Discuss reasons for substitutions
- Identify the most common side effects of anti-TB and ARV drugs
- Describe characteristics and consequences of side effects
- Describe the interaction between anti-TB and ARV drugs
- Explain how to manage the side effects of anti-TB and ARV drugs
- Describe IRIS and its management



- Identify risk factors for TB and HIV and methods to prevent transmission for both diseases
- Identify activities to reduce the disease burden among PLWHA
- Discuss best practices for antenatal, intrapartum and postpartum care of the HIV-positive mother to prevent/reduce mother-to-child transmission (PMTCT)
- Describe the goal of collaborative TB/HIV activities
- Identify objectives of collaborative TB/HIV activities based on the TB/HIV national policy
- Describe the recommended TB/HIV collaborative activities within the first objective
- Describe health care workers' duties and responsibilities regarding TB/HIV collaboration
- Describe record keeping and reporting used in the TB & HIV control programs
- Explain the roles of NLTCP and NACP in relation to collaborative TB/HIV activities
- Identify the following parasites through use of the microscope in the laboratory:
  - Ascaris
  - Strongyloides
  - Pinworm
  - Hookworm
  - Trichuris
  - Guinea worm
- Differentiate nematodes from trematodes
- List at least three nematodes which cause parasitic disease
- Name the five most common types of worms
- List at least two filarial diseases
- List at least 20 bacterial diseases
- Discuss the clinical presentation, epidemiology, reservoir, mode of transmission, incubation period and communicable period of the 20 bacterial diseases you listed
- Discuss the treatment and control (prevention) methods for the following bacterial and viral diseases:
  - Typhoid

### Semester III

- Bacillary dysentery
- Bacterial food poisoning
- Salmonella
- Cholera
- Botulism
- Brucellosis
- Pneumococcal pneumonia
- Pertussis
- Strep and staph infections
- Meningitis
- Tetanus
- Diphtheria
- Plague
- Gangrene
- Cancroid
- Gonorrhoea
- List and discuss the treatment and control methods of the three spirochetal diseases:
  - Syphilis
  - Yaws
  - Tropical ulcer
- List and discuss the causative agents, clinical features, social significance, treatment and control of the three mycobacterial diseases:
  - TB
  - Leprosy
  - Buruli Ulcer
- List and discuss the treatment and control methods of the following viral diseases:
  - Lassa fever
  - Yellow fever

- Measles
- Chicken pox
- Herpes zoster
- Influenza A & B
- Rubella
- Polio
- Rabies
- Mumps
- Hepatitis A
- Hepatitis B
- Dengue
- Lymphogranuloma inguinale
- List and discuss the treatment and control methods of these three ectoparasitic infestations:
  - Scabies
  - Jiggers
  - Lice
- List and discuss the treatment and control methods of at least three fungal diseases

**Course Content:**

**Unit 1 | Introduction to Epidemiology and Disease Surveillance**

**1. BASIC DEFINITIONS OF TERMS AND PROCEDURES:**

- Tropical disease
- Communicable disease
- Preventive measures
- Methods of reporting communicable diseases
- Modes of transmission of communicable diseases
- Principles of vaccines and vaccinations

### **Semester III**

- Classification of parasitic, fungal, viral and bacterial tropical and communicable diseases

## **Unit 2 | Tropical and Communicable Diseases: Prevention and Intervention**

- Transmission Process
- Reportable Diseases
- Reporting Process
- Information required
- Control of spread of disease

## **Unit 3 | Health Promotion**

- Health Promotion Frameworks
- Determinants of health and illness
- Communication and behavior change theories
- Culture, gender and health promotion
- Community mobilization
- Health promotion strategies
- Mobilizing and managing resources for health promotion programs

## **Unit 4 | The Malaria Situation in Liberia**

- Overview of Malaria in Liberia:
  - The prevalence and transmission of malaria in Liberia
  - The current status of progress on achieving malaria indicators in Liberia
  - International support for prevention and case management of malaria
  - Roll Back Malaria (RBM) Strategy
- National Malarial Policy:
  - The key malaria interventions, targets and elements

- Community perception and uptake of malaria programs

### **1. EPIDEMIOLOGY OF MALARIA:**

- Define malaria
- Transmission of malaria
- Causative agent:
  - Factors affecting transmission
- The disease burden of malaria:
  - The effects of malaria on pregnant women and their unborn babies
  - The effects of malaria on pregnant women with HIV/AIDS
- Universal coverage
- Three components of Global Strategy

### **2. ELIMINATION:**

- Test
- Treat
- Track

### **3. RESEARCH:**

- Research and Development
- Research to inform policy
- Operations Research and implementation

### **4. CONTROL:**

- Vector control measures
- Types of vector control measures:
  - The primary interventions:
    - Long Lasting Insecticide-treated nets (LLINs) including long lasting insecticide-treated nets (LLINs)
    - Indoor residual spraying(IRS)
- Other interventions:
  - Larviciding

### Semester III

- Fogging
- Repellents
- Environmental management

### 5. MALARIA CASE MANAGEMENT:

- Steps for proper malaria case management:
  - Malaria Diagnosis:
    - Three types:
      - Self-Diagnosis
      - Clinical Diagnosis
- Signs and symptoms of malaria:
  - Assessing Child with Fever
  - Assessing Adult with Fever
  - Assessing pregnant woman with Fever
  - Clinical Assessment and Diagnosis of Uncomplicated Malaria
  - Clinical Assessment and Diagnosis of complicated/severe Malaria
- Parasitological Diagnosis:
  - Laboratory- Microscope:
    - Advantages and disadvantages
- Rapid Diagnostic Tests (RDT):
  - Advantages and disadvantage
  - When, why and how to use

### 6. TYPES OF MALARIA:

- Uncomplicated - Definition
- Complicated/severe - Definition
- Treatment with Recommended Medicines:
  - National Malaria Treatment Policy
  - Presumptive Treatment
  - Drugs:
    - Artemisinin-based Combination Therapy (ACT)

- Quinine
- Artesunate
- Supportive care:
  - Manage fever: Analgesics, tepid sponging
  - Diagnose and treat anemia
  - Provide fluids
- Treatment for uncomplicated malaria
- Treatment for complicated malaria
- Management of the complications of severe malaria
- Assessment and treatment of danger signs
- Management of Adverse Drug Reactions
- Pharmacovigilance
- Counseling for Adherence
- The process of malaria medication adherence counseling
- Basic Messages
- Community Case Management:
  - Definition
  - Tasks of Community Health Volunteers
  - Role of Professional health worker
  - Training and supervision of CHVs

## **7. CONTROL OF MALARIA IN PREGNANCY:**

- National Strategy
- Consequences of malaria during pregnancy
- Malaria in pregnancy (MIP) strategy:
  - Three elements of malaria prevention and control in pregnancy:
    - Promotion and use of long-lasting insecticide-treated nets
    - The administration of intermittent preventive treatment Malaria in pregnancy using sulfadoxine-pyrimethamine (IPTp-SP)

### Semester III

- The use of sulfadoxine-pyrimethamine (SP) for IPTp, including dosage, timing and contraindications:
  - The first IPTp-SP dose should be administered as early as possible during the 2nd trimester of gestation (after quickening)
  - Each SP dose should be given at least 1 month apart
  - The last dose of IPTp with SP can be administered up to the time of delivery, without safety concerns
  - IPTp with SP is safe up until delivery
  - IPTp should ideally be administered as directly observed therapy (DOT)
  - SP can be given either on an empty stomach or with food
  - Folic acid at a daily dose equal or above 5 mg should not be given together with SP as this counteracts its efficacy as an antimalarial
  - Folic acid ( $\geq 5\text{mg}$ ) may be withheld for 2 weeks following IPTp-SP administration
  - SP should not be administered to women receiving cotrimoxazole prophylaxis
- Appropriate case management through prompt and effective diagnosis and treatments of Malaria in pregnant women.
- Uncomplicated Malaria:
  - All Trimesters:
    - Oral Quinine-first line treatment
  - Second and Third Trimesters:
    - Fixed dose Artemisinin-Based Combination Therapy (ACT) Artesunate and Amodiaquine.
- Severe or complicated Malaria:
  - All Trimesters:
    - Quinine Intra Venous
  - Second and Third Trimesters

### 8. ARTEMETHER/ARTESUNATE IM/ OR V

### 9. MALARIA AND THE HEALTH SYSTEM:

- Pharmacovigilance
- Supervision and Surveillance:
  - Essential elements of a surveillance system



- Data Collection and Reporting
- Malaria Treatment Forms

## UNIT 5 | TB & HIV/AIDS

- A global view of HIV infection
- Magnitude and distribution of HIV and AIDS in Liberia
- Global TB epidemiology
- Global TB incidence
- Case detection rates
- Global TB control targets
- Multi-drug resistant TB
- Global burden of tuberculosis
- TB in Liberia
- Effects of HIV on incidence of TB
- Case definitions
- Site of disease:
  - Pulmonary/extrapulmonary
  - Severity of disease
- Bacteriology:
  - Smear negative/smear positive
  - History of previous TB
- Epidemiological definitions:
  - Prevalence
  - Incidence
  - Mortality
  - Case fatality
  - TB morbidity
  - Infected pool

### Semester III

- Infectious pool
- Collaborative TB/HIV activities
- Goal and objectives
- Rationale
- Roles of NLTCP and NACP
- Roles health workers
- Defining HIV & AIDS
- Ways of HIV transmission:
  - Unprotected sexual contact with an infected partner/s
- Contact with HIV-infected blood/blood products:
  - Blood transfusion
  - Injection drug use (IDU) through needle-sharing
  - Needle stick accidents
  - Unsterilized needles
- Mother-to-child transmission:
  - In utero
  - During labor and delivery
  - Through breast feeding
- Natural history of HIV infection without treatment
- How does HIV make you sick?
- How does HIV cause AIDS?
- HIV and the immune system:
  - CD4 & viral load
  - T-cell
  - Consequences of HIV infection
  - HIV progression
- 3 main stages which include:
  - Acute infection (early immune depletion)

- Clinical latency (intermediate immune depletion)
- AIDS (severe immune depletion)
- HIV diagnostics:
  - Specific laboratory tests in HIV infection:
    - HIV diagnosis:
      - Rapid test or Elisa
      - DNA PCR test (for children under 18 months) (if available)
- Treatment eligibility and outcome:
  - CD4 cell count
  - Viral load (if available)
- Rapid HIV antibody testing:
- Rapid tests examples:
  - Capillus (1st test)
  - Determine (2nd test)
  - If discordant: repeat, if still discordant send specimens to regional lab for Elisa testing
- HIV diagnostics in newborn
- Dried blood spot (DBS):
  - How to collect DBS
- HIV counselling and testing approaches used in Liberia:
  - Client-initiated HIV counselling and testing = voluntary counselling and testing (VCT)
  - Provider-initiated HIV testing and counselling (PICT)
  - Mandatory HIV screening (i.e. Court order, etc.)
  - HIV testing for medical research and surveillance
- Definitions:
  - Voluntary testing and counselling (VCT):
    - Provider-initiated testing and counselling (PICT):
      - PICT
      - Principles

### Semester III

- PICT should follow the 3 “c’s”:
  - Counselling
  - Consent
  - Confidentiality
- Recommendations
- Rationale
- Benefits
- Types
- Differences between VCT and PICT:
  - HIV testing in TB patients
  - Counselling procedures in PICT
  - Counselling skills for PICT
  - Communication skills for PICT
- Pre-test and post-test:
  - Process
  - Information
  - Counselling
  - Providing test results
  - Recording test results
- Clinical staging in HIV:
  - Who staging for HIV infection and disease in adults and adolescents
- Clinical stage 1:
  - Asymptomatic
  - Persistent generalized lymphadenopathy (PGL)
- Clinical stage 2:
  - Weight loss, < 10 % of body weight
  - Recurrent respiratory tract infections (sinusitis, tonsillitis, otitis media, pharyngitis)
- Herpes zoster
- Angular cheilitis

- Recurrent oral ulcerations
- Papular pruritic eruptions
- Seborrheic dermatitis
- Fungal nail infections
- Clinical stage 3:
  - Weight loss, > 10 % of body weight
  - Unexplained chronic diarrhoea, > 1 month
  - Unexplained persistent fever (intermittent or constant), > 1 month
  - Oral candidiasis (thrush)
  - Acute necrotizing ulcerative gingivitis
  - Oral hairy leukoplakia
  - Pulmonary tuberculosis
  - Severe bacterial infections (i.e., pneumonia, meningitis, pyomyositis)
  - Unexplained anaemia, neutropenia
- Clinical stage 4:
  - HIV wasting syndrome
  - Pneumocystis jiroveci pneumonia (carinii)
  - Recurrent severe bacterial pneumonia
  - Herpes simplex virus (HSV) infection, mucocutaneous > 1 month, or visceral any duration
  - Candidiasis of the oesophagus, trachea, bronchi or lungs
  - Extrapulmonary tuberculosis
  - Kaposi's sarcoma
  - Cytomegalovirus (CMV) disease of an organ other than liver, spleen or lymph nodes
  - Toxoplasmosis of the central nervous system
  - HIV encephalopathy
  - Extra pulmonary cryptococcosis
  - Thrombocytopenia

### Semester III

- Atypical mycobacteriosis (NTM), disseminated
- Progressive multifocal leukoencephalopathy (PML)
- Cryptosporidiosis with diarrhoea, > 1 month
- Chronic isosporiasis
- Any disseminated endemic mycosis (i.e. Histoplasmosis, coccidioidomycosis)
- Recurrent septicaemia (including non-typhoid salmonella)
- Lymphoma
- Invasive cervical cancer
- Atypical disseminated leishmaniasis
- Symptomatic HIV associated nephropathy or cardiomyopathy
- Opportunistic infections
- Common and serious respiratory conditions in HIV (excluding TB):
  - Upper respiratory tract infections
  - Pneumonia
  - Tuberculosis
  - Kaposi sarcoma
  - Lymphocytic interstitial pneumonitis (children)
- Symptoms:
  - Diagnosis
  - Treatment
- PCP:
  - Clinical manifestations
  - Treatment
- Gastrointestinal illnesses:
  - Oral manifestations clinical manifestations and treatment of:
    - Oral candidiasis (thrush) leading to oesophageal candidiasis
    - Oral hairy leukoplakia
    - Acute necrotizing ulcerative stomatitis, gingivitis, or periodontitis
    - Mucocutaneous herpes
    - Chelitis

- Kaposi sarcoma
- Aphthous ulcers
- Diarrhoea- clinical manifestations, diagnosis and treatment of:
  - Non-typhoid salmonella
  - Cryptosporidiosis
  - Microsporidiosis
  - Isosporosis
  - Atypical mycobacteria
  - Cytomegalovirus
- Dermatological manifestations- dermatologic descriptions, clinical manifestations & treatment of:
  - Herpes simplex
  - Varicella zoster
  - Disseminated varicella
  - Papular pruritic eruption
  - Seborrheic dermatitis
  - Kaposi sarcoma
  - Cutaneous cryptococcosis
- Neurological manifestations- clinical manifestations, diagnosis & treatment of:
  - HIV meningitis
  - Bell's palsy
  - Guillain-Barre syndrome
  - Peripheral neuropathy
  - Myopathy/myositis
  - Peripheral neuropathy
  - HIV encephalitis
  - Cervical cancer:
    - Assessment
    - Signs and symptoms
    - Treatment:
      - Pre-invasive stage

### Semester III

- Invasive stage
- Care and treatment of HIV:
  - Components of HIV/AIDS care and support
- Prophylaxis:
  - Cotrimoxazole:
    - Indications for use in HIV
    - When to give cotrimoxazole preventive therapy (CPT)
    - Cotrimoxazole prophylaxis: children
    - Dosing of CTX in children
    - Monitoring of CPT
    - Contra-indications
    - Alternatives to CPT
- Antiretroviral therapy (ART)
- Definition:
  - Arv and ART
- Goal and benefits of ART
- How to treat HIV
- Important information for prescribers
- Mode of action
- When to start ART:
  - Adults and adolescents: current guidelines in Liberia
  - Children: current Liberian guidelines
  - Pregnant women
- Before initiating therapy:
  - Confirm HIV results
  - Complete H&P
  - CD4 count
  - Treat any opportunistic infection
  - Assess “readiness” for treatment and adherence



- Reasons for deferral of ART
- Reasons for withholding ART
- Special considerations of ART in TB and HIV co-infected patients
- Antiretroviral agents:
  - Three main classes of ARV agents:
    - Nucleoside reverse transcriptase inhibitors- NRTIS(and NTRTIS)
    - Non-nucleoside reverse transcriptase inhibitors-NNRTIS
    - Protease inhibitors-PIS
  - Two additional drug classes:
    - Fusion inhibitors
    - Integrate inhibitors
- ARVS in Liberia:
  - NRTIS:
    - Zidovudine (AZT)
    - Stavudine (D4T)
    - Lamivudine (3TC)
    - Tenofovir (TDF)
    - Didanosine (DDL)
    - Abacavir (ABC)
  - NNRTIS:
    - Nevirapine (NVP)
    - Efavirenz (EFV)
  - PIS:
    - Lopinavir/ritonavir (LPV/R)
    - Atazanavir (ATV)
    - Nelfinavir (NFV)
- Adherence:
  - Description
  - The “rule” of thirds:
    - 1/3 take medication as prescribed
    - 1/3 are intermittently adherent

### Semester III

- 1/3 take little or no medication
- Determine adherence and predicting success
- Improving adherence
- Adherence in special populations
- Adherence strategies:
  - Negotiate a treatment plan
  - Treat when patient is ready – thorough adherence counseling
  - Educate
  - Reminder devices
  - Social support
  - Others
  - Communicate with Patient in a non-judgemental manner
  - Treat depression and/or substance abuse
  - Use patient record as reminder

### 10. TUBERCULOSIS:

- Describe Tuberculosis
- TB diagnostic approaches
- History and examination
- Differential diagnosis for TB suspects:
  - Bacterial pneumonia or atypical pneumonia
  - Pneumocystic carinii pneumonia (PCP)
  - Lung abscess or bronchiectasis
  - Asthma or chronic obstructive airway disease
  - Occupational lung disease
  - Lung cancer
  - Congestive cardiac failure
  - Kaposi sarcoma of the lung

- Laboratory examinations:
  - AFB microscopy for sputum and aspirates
  - Culture - sputum, aspirates for EPTB
  - Histological examination - biopsy tissue
- Screening of TB suspects:
  - Active case finding
  - AFB sputum smear microscopy
  - Techniques of collecting sputum for microscopy
  - False positive sputum smear microscopy result
  - False negative sputum smear microscopy result
  - Chest x-ray (CXR)
- Other diagnostic methods:
  - Tuberculin skin test:
    - Indicates mycobacterium infection not the presence of tuberculosis disease
    - Used in children
- Erythrocyte sedimentation (ESR)
- Non-specific and should not be used as a routine diagnostic tool for TB
- TB in children:
  - Natural progression
  - Signs suggestive of TB in children:
    - Persistent pneumopathy after two different, well-monitored antibiotic treatments
    - Meningeal signs, often in a sub-acute context, occasionally associated with a focal neurological deficit
    - Stiffness and vertebral deformation, sub-acute arthritis in general,
    - One or more adenopathies, firm or soft, painless
    - Close contact of known case of sputum positive TB
  - Tools for TB diagnosis in children:
    - Clinic (symptoms consistent with TB+, clinical examination)
    - Sputum smear microscopy

### Semester III

- Paraclinic examination. i.e. CXR
- Tuberculin skin testing (PPD)
- TB score of Keith Edwards
- Others (quantiferon-TB gold test, PCR...)
- Recommended approach to diagnose TB in children:
  - Careful history (including history of TB contact and symptoms consistent with TB)
  - Clinical examination (including growth assessment)
  - TB score
  - Bacteriological confirmation whenever possible
  - Tuberculin skin testing (PPD)
  - Investigations relevant for suspected PTB and suspected EPTB i.e. CXR, ultrasound
  - HIV testing (in high HIV prevalence areas)
- Laboratory testing:
  - Expectoration: difficult to obtain sputum from young children, around 10% are positive
  - Gastric aspiration: performed in young children who are unable or unwilling to expectorate sputum
  - Highest yield specimen:
    - ~ 50% yield in children with TB
  - Must be done for *hospitalized pt*
- Sputum induction:
  - Safe and effective in children of all ages
  - Bacterial yields are as good as or better than for gastric aspirates
- Tuberculin skin test
- Paraclinical examination
- TB score
- Care and treatment of tuberculosis:
- History of TB treatment:
  - TB drug development milestones
  - 1944 | streptomycin

- 1949 | p-aminosalicylic acid
- 1952 | isoniazid
- 1954 | pyrazinamide
- 1955 | cycloserine
- 1962 | ethambutol
- 1963 | rifampicin
- Aims of TB treatment:
  - To cure at least 85% of smear positive PTB cases
  - To prevent death in the very ill
  - To prevent lung damage
  - To avoid relapse
  - To prevent the development of resistant TB bacilli
  - To prevent others from becoming infected
  - To stop the spread of the TB epidemic, relieve health service
- Treatment regimens:
  - Category I regimen for new patients
  - Category II regimen for re-treatment patients
  - Category III regimen for children with less severe cases
  - Category IV for chronic and MDR-TB cases
- Case definition:
  - New case
  - Relapse
  - Treatment after default/treatment after interruption (TAI)
  - Transfer in
  - Other
- Short course chemotherapy:
  - Drugs:
    - Isoniazid (H)
    - Rifampicin (R)

### Semester III

- Pyrazinamide (Z)
  - Ethambutol (E)
  - Streptomycin (S)
- Treatment regimens:
  - Fixed-dose combinations
  - New cases
  - Retreatment cases
  - Special situations:
    - Pregnancy
    - Breastfeeding
    - Oral contraception
    - HIV & AIDS infection
    - Adjuvant steroid thera
- Directly Observed Treatment Short Course (DOTS):
  - Description:
    - Health facility based DOTS
    - Community based DOTS
- Five key components:
  - Political commitment and increase and sustained financing
  - Case detection through quality assured microscopy
- Standardized treatment with supervision of the patient:
  - All health care workers should provide DOTS
  - DOTS should be observed in all phases of treatment
  - All patients should receive treatment adherence counseling
  - Patients lost to follow up should be traced, retrieved and attempts made for adherence
  - There can be flexibility in observing patients
- Uninterrupted supply of quality assured medications
- Monitoring and evaluation system and impact measurement
- DOTS in Liberia:

- Patient education
- Monitoring patient treatment response:
  - New sputum smear positive patients
  - New sputum smear negative pulmonary patients
  - Previously treated pulmonary sputum positive patients
- Drug interruption:
  - Less than one month
  - Less than 2 months
  - More than two months(defaulters)
- Treatment outcomes definitions:
  - Cure
  - Treatment completed
  - Failure
  - Died
  - Defaulter
  - Transfer out
- Drug resistance:
  - Two types of drug resistance:
    - Primary drug resistance
    - Acquired drug resistance
- Directly Observed Treatment Short Course (DOTS):
  - Description:
    - Health facility based DOTS
    - Community based DOTS
- Five key components:
  - Political commitment and increase and sustained financing
  - Case detection through quality assured microscopy
  - Standardized treatment with supervision of the patient:
    - All health care workers should provide DOTS
    - DOTS should be observed in all phases of treatment

### Semester III

- All patients should receive treatment adherence counseling
- Patients lost to follow up should be traced, retrieved and attempts made for adherence
- There can be flexibility in observing patients
- Uninterrupted supply of quality assured medications
- Monitoring and evaluation system and impact measurement
- DOTS in Liberia
- TB preventive treatment:
  - BCG vaccine
  - Scale-up PMTCT
  - Chemoprophylaxis:
    - INH preventive therapy (IPT)
  - Other treatment:
    - Nutritional support
    - HIV care and treatment
- Side effects of anti-TB and ARV drugs, drug interactions, and iris:
  - Introduction
  - Side effects
  - Description
  - Types:
    - Minor
    - Major (potentially dangerous)
  - Consequences of side effects
  - Conditions for increased risk of severe side effects
- Side effects of anti-TB drugs:
  - Reason
  - Adverse reaction
  - Signs and symptoms
- Side effects of ARVs:
  - Drug



- Adverse reaction
- Signs and symptoms
- Side effects of anti-TB drugs and ARVs:
  - How to assess/identify
  - How to monitor
  - How to manage
  - Common side effects:
    - Nausea
    - Diarrhea
    - Rash
    - Fatigue
    - CNS effects
  - Severe side effects:
    - Hepatotoxicity
    - Stevens Johnson syndrome
    - Mitochondrial toxicity-hyperlactataemia
  - Others:
    - Zidovudine-associated anaemia
    - Side effects of cotrimoxazole
    - Metabolic effects of protease inhibitors
    - Anti-TB and ARV drugs interaction and overlapping
- Immune reconstitution inflammatory syndrome:
  - Description
  - Risk factor
  - Clinical presentation of IRIS
  - Diagnosis
  - Management principles of IRIS
  - Prevention of IRIS
- TB IRIS:
  - Description

### Semester III

- Management of TB IRIS
- Decreasing the burden of tuberculosis in people living with HIV and AIDS:
  - Activities to reduce TB burden among PLWHA:
    - Establish intensified TB case-finding
    - Introduce isoniazide (INH) preventive therapy
    - Ensure TB infection control in health care settings and congregate settings
    - Provide information about TB and treatment
  - Decreasing the burden of HIV in tuberculosis patients:
    - Activities to reduce HIV burden among TB patients:
      - Provide HIV counseling and testing
      - Introduce HIV prevention methods
      - Introduce cotrimoxazole preventive therapy (CPT)
      - Ensure care and support
      - Provide ARV therapy
- Preventing mother-to-child transmission of HIV:
  - Description
  - Who four prong approach to PMTCT:
    - Primary prevention of HIV
    - Prevention of unintended pregnancy
    - Prevention of mother to child transmission
    - Linkages to support and care
- Timing of mother-to-child transmission of HIV:
  - During pregnancy - 5-10%
  - During labor and delivery - 10-20%
  - During breastfeeding - 5-10%
- Possible adverse pregnancy outcomes with HIV infection:
  - Spontaneous abortion
  - Stillbirth
  - Perinatal mortality
  - Newborn mortality

- Intrauterine growth restriction
- Low birth weight
- Preterm delivery
- Risk factors for MTCT:
  - Viral:
    - Viral load (the higher the viral load, the greater the risk of HIV transmission)
    - Viral resistance
  - Maternal:
    - Maternal immunological status
    - Maternal nutritional status
    - Maternal clinical status (including co-infection with an STI)
    - Behavioral factors
    - Antiretroviral treatment
  - Obstetrical:
    - Prolonged rupture of membrane (longer than 4 hours)
    - Mode of delivery
    - Intrapartum hemorrhage
    - Obstetrical procedures
    - Invasive fetal monitoring
  - Fetal:
    - Prematurity
    - Genetic
    - Multiple pregnancy
  - Infant:
    - Breastfeeding
    - Gastrointestinal tract factors
    - Immature immune system
  - PMTCT activities:
    - Counseling:
      - Educate/counsel regarding HIV and pregnancy
      - Counseling before pregnancy is important
      - Counseling HIV-positive pregnant women

### Semester III

- Provide ANC care
- ANC allows interaction between the health facility and sexually active women
- Provides opportunities to discuss the interventions for reducing the risk of MTCT
- Antenatal interventions to reduce MTCT:
  - HIV testing and counseling services
  - Behavior change communication:
    - Sexual activity
    - Injection drug use
    - Alcohol use and smoking
  - Prevention of new infections in pregnancy
  - Identification and treatment of STIs (genital ulcers and abnormal vaginal discharge)
  - Prevention and treatment of anemia (balanced diet and nutritional supplementation)
  - Avoiding invasive testing procedures in pregnancy
  - Antiretroviral prophylaxis for HIV positive mother
  - ARVs should be provided as needed to the mother for her health as well as for the health of the baby
  - Physical examination to detect any signs of HIV-related illness
  - Iron and folate
  - Multivitamin supplementation
  - Tetanus toxoid immunization
  - Intermittent preventive treatment (IPT) with sulfadoxine-pyrimethamine (SP) for malaria
- Intrapartum activities
- Use of universal IP precautions:
  - Application of good infection prevention practices during pelvic examinations and delivery
  - Avoiding unnecessary artificial rupture of membranes
  - Avoiding prolonged labor and prolonged rupture of membranes

- Avoid unnecessary trauma during delivery:
  - Unnecessary episiotomy
  - Fetal scalp electrode monitoring
  - Forceps delivery
  - Vacuum extraction
- Minimize risk of PPH (to protect mother's health and decrease provider exposure to blood):
  - Active management of 3rd stage:
    - Administer oxytocin immediately after delivery
    - Controlled cord traction
  - Uterine massage:
    - Repair any genital tract lacerations
    - Carefully remove all products of conception
  - Provide newborn care:
    - Wash newborn after birth, especially face
    - Avoid hypothermia
    - Cut cord under cover of a lightly wrapped gauze swab, to prevent blood spurting
    - Give antiretroviral agents, if available
    - Watch for anemia
    - Follow up infant for infection prevention
    - Handle all babies, regardless of the mother's HIV status, with gloves until maternal blood and secretions are washed off
    - All babies, irrespective of HIV status, should be kept warm post-delivery
    - Do not suction the newborn with a nasogastric (NG) tube unless there has been meconium-stained liquid. Where suctioning is required:
      - Use a mechanical suction unit (at a pressure below 100mm hg) or bulb suction, if possible, rather than the mouth operated suction. Do not use the bulb syringe for another baby
      - Attach the baby to the mother's breast only if the mother has made a prior decision to breastfeed
  - If the mother has decided not to breastfeed, place the baby on the mother's body for skin-to-skin contact. Provision should be made to provide the mother with infant formula.
  - Vitamin K should be administered as per national guidelines

### Semester III

- BCG should be administered according to the national/who immunization guideline
- Antibiotic or 1% silver nitrate eye ointment should be administered as prophylaxis against ophthalmia neonatorum according to the national/who immunization guideline
- Administer ARV according to protocol for eligible women and newborn
- Infant feeding options for the HIV infected mother
- Exclusive breastfeeding up to six months
- Exclusive bottle feeding considering that formula is acceptable, feasible, affordable, sustainable and safe (AFASS)
- Provide FP counseling and services:
  - Effectiveness
  - Safety/side effects
  - Effect on HIV transmission or progression
  - Effect on STI transmission or acquisition
  - Ease of use
  - Non-contraceptive benefits
  - Potential interactions with other medications

### **11. FOR EACH DISEASE LISTED THE FOLLOWING WILL BE COVERED:**

- Infectious agents (and life cycle if parasitic)
- Reservoir
- Mode of transmission
- Epidemiology
- Incubation/communicability period
- Carriers
- Patterns of susceptibility and resistance
- Methods of control and prevention
- Treatment measures

## Unit 6 | Protozoal Diseases

- Black water fever
- Trypanosomiasis
- Leishmaniasis
- Amebiasis
- Giardiasis
- Balantidiasis (associated with raising pigs)
- Trichonomiasis

## Unit 7 | Nematodes

- Definition
- Description of nematodes:
- Ascaris
- Hookworm
- Guinea worm
- Strongyloides
- Trichuris
- Pinworm
- Illnesses

## Unit 8 | Cestodes

- Taenia solium
- Taenia saginata

## Unit 9 | Trematodes – Schistosomiasis

- S. hematobium
- S. mansoni

### Semester III

#### **Unit 10 | Filaria**

- Elephantiasis
- Onchocerciasis

#### **Unit 11 | Bacterial Diseases**

- Typhoid
- Bacillary dysentery/shigella
- Salmonella
- Cholera
- Bacterial food poisoning
- Botulism
- Brucellosis
- Gangrene
- Pneumococcal pneumonia
- Pertussis
- Strep and staph infection
- Meningitis
- Diphtheria
- Tetanus
- Plague
- Chancroid
- Gonorrhoea

#### **Unit 12 | Mycobacterial Diseases**

- Leprosy
- Buruli ulcer



### **Unit 13 | Spirochetal Diseases**

- Syphilis
- Yaws
- Tropical ulcer

### **Unit 14 | Viral Diseases**

- Lassa fever
- Yellow fever
- Measles
- Chicken pox
- Herpes zoster
- Influenza A & B
- Common cold
- Rubella
- Polio
- Rabies
- Mumps
- Hepatitis A
- Hepatitis B
- Dengue
- Lymphogranuloma inguinale

### **Unit 15 | Fungal Diseases**

- Tinea (ringworm)
- Histoplasmosis
- Candida

## Unit 16 | Insect-Related Diseases/Ectoparasitic Infestations

- Scabies
- Jiggers
- Lice

### Competencies

Knowledge	Attitudes/Behavior	Skills
<p>Identifies the roles and skills of the health care team</p> <p>Identify the common tropical and parasitic diseases with special emphasis on Malaria, HIV/AIDS and TB</p> <p>Understand the principles of prevention of selected tropical and communicable diseases, with emphasis on Malaria, TB and HIV and AIDS</p>	<p>Recognizes the centrality of a multidisciplinary team approach to patient care</p> <p>Values the perspectives and expertise of each member of the health care team in prevention and management of tropical and communicable diseases</p>	<p>Demonstrates ability to effectively participate in multidisciplinary teams</p> <p>Manages selected tropical and communicable diseases including, malaria, TB, HIV&amp;AIDS</p> <p>Models effective communication and promotes cooperative behaviors in prevention and management of tropical and communicable diseases</p> <p>Shows tolerance for different viewpoints</p>
<p>Understands role and responsibilities as advocate in assisting patient in seeking and obtaining care for prevention and management of tropical and communicable diseases</p>	<p>Values role and responsibilities as patient advocates</p> <p>Values partnerships in providing high quality patient care</p> <p>Values effective communication and information sharing across disciplines and throughout transitions in care</p> <p>Appreciates role and responsibilities in using education and referral to assist the patient and family in prevention and management of tropical and communicable diseases</p>	<p>Serves as a patient advocate</p> <p>Assists patients and families in dealing with tropical and communicable disease Uses education and referral to assist the patient and family received for tropical and communicable diseases</p>

### Teaching/Learning Strategies:

- Lecture
- Discussion
- Group assignments

- Laboratory

**Learning Setting:**

- Classroom
- Clinical area

**Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%

**Text Book:**

*Basic Clinical Parasitology*, Brown.

Heyman, D. L. (2008). *Control of communicable diseases manual*, 19th ed., Washington DC, American Public Health Association

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Eddleston, M., Davidson, R., Brent, A., & Wilkinson, R. (2008). *Oxford handbook of tropical medicine*, 3rd ed., Oxford, Oxford university press.

Fernando, R. L., Fernando, S. S. E., & Leong, A. S.-Y. (2001). *Tropical infectious diseases: Epidemiology, investigation, diagnosis & management*. London, Alden Press, Ltd.

Ministry of Health and Social Welfare. (2011). National therapeutic guidelines for Liberia and essential medicines

2003. *The Merck manual of medical information*, 2nd ed. United States of America, Merck & Co., Inc.

References – slides with synopsis of infectious and tropical diseases

# Course Title: Primary Health Care II Community Health and Epidemiography

**Credits:**

3

**Duration:**

16 Weeks (14 instructional and 2 exams)

42 hours classroom

126 clinical hours

**Placement:**

First semester Second Year

**Pre-requisites:**

PHC I, Fundamentals of Midwifery I & II, Anatomy & Physiology, Basic Health Sciences, Basic English, Basic Computer

**Introduction/Course Description:**

This is the continuation of the concepts of Primary Health Care I focusing on the midwife working in community health. This course will further strengthen the knowledge, skills and attitudes of the students in the concepts critical to Primary Health Care and Community Health, including epidemiology and demography. Application of concepts will be obtained in classroom and field exercises.

**General Objective:**

At the end of this course, students will be able to:

- Understand the importance of the concept of epidemiology and demography in public health
- Apply the basic concepts and principles of epidemiology and demography in relationship to midwifery, especially as it relates to community health
- Understand how to analyze demographic health statistics

**Specific Objectives:**

Students will be able to:

- Describe community health
- Discuss history of community
- Discuss basic concepts of community
- Identify roles and functions of midwifery in community health
- Define epidemiology

- Describe concepts of epidemiology
- Describe the epidemiological model
- State the three levels of prevention
- Describe how epidemiology relates to medicine/public health/midwifery
- Define and interpret basic epidemiological measures of association, including an understanding of causality
- Discuss natural history of disease
- Identify the use of epidemiology and demography in public health/midwifery
- Analyze demographic health statistics
- Apply epidemiological concepts to field exercises

**Course Content:**

**Unit I | Overview of Community Health/Theoretical Basis of Community Health Practice**

**1. DEFINITIONS**

**2. HISTORICAL DEVELOPMENT**

**3. THEORIES AND MODELS OF COMMUNITY HEALTH**

**4. BASIC CONCEPTS OF COMMUNITY HEALTH, PUBLIC HEALTH AND PRIMARY HEALTH CARE:**

- Community as a client
- Levels of prevention

**5. LEGAL AND ETHICAL FRAMEWORK IN COMMUNITY HEALTH:**

- Public Health Act
- Millennium Development Goals
- National Health and Social Welfare Policy & Plan
- Essential Package of Health Services

## **Unit 2 | The Art and Science of Community Health**

### **1. THE COMMUNITY AS A CLIENT**

### **2. ASSESSMENT OF THE COMMUNITY:**

- Approaches to assessing a community health status
- Types of community needs assessments
- Community assessment methods
- Application of process in community health assessment, diagnosis, planning, implementation, and evaluation
- Levels of prevention in the community (primary, secondary and tertiary)

### **3. COMMUNITY HEALTH AND THE MIDWIFE:**

- Role of midwife

### **4. ACTIVITIES OF THE MIDWIFE IN COMMUNITY HEALTH:**

- Community Assessment
- Community mobilization
- Health Promotion
- Determinants of health
- Provision of MNCH and ASRH services in the community
- Management of outbreaks - disasters
- Management of community health information
- Training and supervision of Traditional midwives

## **Unit 3 | Health Promotion**

- Health Promotion Frameworks
- Determinants of health and illness
- Communication and behavior change theories
- Culture, gender and health promotion
- Community mobilisation

- Health promotion strategies
- Mobilising and managing resources for health promotion program

#### **Unit 4 | Environmental Health**

- Public Health Act
- Environmental public health issues:
  - Water supply (in both urban and rural areas)
  - Management of solid and liquid wastes (waste disposal)
- Environmental pollution and control:
  - Food hygiene

#### **Unit 5 | Family Health**

- The family as a client
- Theoretical frameworks guiding the family assessment process (structural-functional framework, interactional approach, developmental approach, systems approach)
- Family needs assessment
- Family health interventions

#### **Unit 6 | School Health**

- History of school health nursing
- The role of a midwife in school health
- Health assessment, screening, identification, referral and follow up
- The School Health program
- The School Health Policy
- Challenges of the implementation of the school health program
- School health services, programme and plans -first aid, treatment of minor ailments
- Adolescent health
- Guidance and counseling

### Semester III

- School health records- maintenance and importance

## **Unit 7 | Community Home-based care and Palliative Care**

- The concept home-based care and comprehensive community home-based care
- Roles and responsibilities of home-based care providers
- Policy on Home Based Care
- Different levels of care in comprehensive community home-based care (CHBC)
- Models of Community Home Based Care
- Issues in Palliative Care and Home Based Care
- Discharge Planning and Continuity of care
- Multi-sectoral approach in CHBC

## **Unit 8 | Occupational Health**

- The role of a midwife in the work settings
- Occupational health and safety Act
- Health and safety in the workplace
- Ergonomics and Ergonomic solutions
- Occupational hazards of different categories-physical, chemical, biological, mechanical, Accidents, Foreign bodies
- Health screening in Occupational Health settings
- Current occupational health issues
- Health promotion in the workplace [Prevention and control of occupational diseases, disability, limitation and rehabilitation]
- Women and occupational health
- Occupational Educational and Counseling
- Violence at Workplace
- Legal issues including child labor and its implications to health of a child



## Unit 9 | Disaster Preparedness

- The concept disaster management
- The scope and nature of disaster and emergency
- Assessing the effects of a disaster
- The roles and responsibilities of the midwife, disaster teams and stakeholders in disaster management
- Disaster Preparedness Plan
- Principles of triage in managing a disaster

## Unit 10 | Overview of Epidemiology

### 1. DEFINITION AND SCOPE OF EPIDEMIOLOGY:

- Introduction to epidemiology and disease surveillance

### 2. BASIC TERMINOLOGIES AND PRINCIPLES:

- Immunity
- Outbreak
- Investigation
- Surveillance
- Interpreting Data
- Screening
- Natural history of diseases
- Disease control and prevention

### 3. INTRODUCTION TO EPIDEMIOLOGY:

- Basic terminologies and principles
- Outbreak investigation, surveillance, interpreting data, screening and natural history of diseases
- Disease control and prevention
- Emerging and re-emerging epidemics (nationally, regionally and globally)

### Semester III

- National Integrated disease surveillance programme
- Managing health information
- Conducting an epidemiologic study and compiling an epidemiological report
- Epidemics in national, regional and global communities
- National Integrated disease surveillance programs
- Managing health information
- Conducting an epidemiological study and compiling the report

#### **4. USES OF EPIDEMIOLOGY IN THE FIELD OF PUBLIC HEALTH & MIDWIFERY:**

- Monitoring health
- Public health surveillance:
  - National Integrated disease surveillance programme
  - Evaluating the effectiveness of public health interventions
  - Developing health policy
- Epidemiological studies:
  - Cross sectional
  - Cohort
  - Case/control and clinical trials:
    - Descriptive
    - Analytical
    - Experimental

#### **5. BASIC EPIDEMIOLOGICAL MEASURES OF ASSOCIATION INCLUDING AN UNDERSTANDING OF CAUSALITY**

#### **6. NATURAL HISTORY OF DISEASE:**

- Outbreak investigation
- Surveillance:
  - Emerging and re-emerging epidemics, nationally, regionally and globally
  - Interpreting data
  - Epidemiological report

## 7. POPULATION SCREENING – SENSITIVITY, SPECIFICITY

### Unit 11 | Use of Health Indicators in Epidemiology

#### 1. TYPES OF HEALTH INDICATORS

#### 2. DEFINITION AND TYPES OF HEALTH STATISTICS:

- Review of measurement of mortality:

- Crude death rate
- Maternal mortality rate
- Infant mortality rate
- Neo-natal mortality rate
- Post-natal mortality rate
- Peri-natal mortality rate
- Still-birth rate
- Age specific death rate
- Measures of morbidity

#### 3. LIST AND DEFINE DISEASE RATES IN EPIDEMIOLOGY:

- Prevalence and incidence of a disease
- Relative risk, attributable risk

#### 4. DEFINITION AND SCOPE OF EPIDEMICS:

- Epidemiological surveillance
- Epidemic prevention and control
- Epidemic in emergency and normal situation

#### 5. PATIENT RECORD-KEEPING IN HEALTH FACILITIES:

- Common terms used in epidemiological reports
- Importance of epidemiological reports
- Stock management system in health facilities

#### 6. PUBLIC HEALTH AND MIDWIFERY

**7. EPIDEMIOLOGICAL SURVEY (FIELD EXERCISES; LAB)**

**Unit 12 | Demography**

**1. BRIEF HISTORY OF DEMOGRAPHY**

**2. DEFINITION OF DEMOGRAPHY**

**3. SCOPE OF DEMOGRAPHY:**

- Size
- Distribution
- Structure
- Change
- Population pyramid

**4. DEMOGRAPHY IN MIDWIFERY**

**5. SOURCE OF POPULATION DATA:**

- Conventional source
- Unconventional source

**6. CALCULATION OF RATES AND RATIOS DEMOGRAPHIC VARIABLE:**

- Sex ratio
- General sex ratio
- Dependency ratio
- Age ration
- Birth rate
- Death rate

**7. ASPECTS OF POPULATION CENSUS:**

- Static
- Dynamic

**8. TYPES OF CENSUS ERRORS:**

- Coverage
- Content

**9. PROCEDURES USE IN CENSUS ENUMERATION:**

- De-jure
- De-facto
- Household
- Canvasser

**10. TYPES OF DEMOGRAPHIC SURVEYS:**

- Single-round
- Multi-round

**11. VITAL REGISTRATION SYSTEM:**

- Legal status of vital statistical system in Liberia
- Method of obtaining systematic vital statistics:
  - Registration method
  - Enumeration method
  - Survey method
  - Population register

**12. STOCK AND FLOW DATA**

**13. ESTIMATES AND USES OF POPULATION GROWTH RATES (LAB):**

- Arithmetic growth rate
- Geometric growth rate
- Exponential growth rate
- Annual change
- Absolute change
- Intersensal growth rate
- Population pyramid

**Semester III**

**14. FERTILITY AND REPRODUCTION:**

- Crude birth rate
- General fertility rate
- Age specific fertility rate
- Total fertility rate
- Gross reproduction rate
- Net reproduction rate

**15. MEAN NUMBER OF CHILDREN EVER BORN**

**16. AGE PATTERN OF FERTILITY:**

- Mean age
- Median age
- Modal age

**17. BY URBANIZATION AND RURALIZATION:**

- Education attainment
- Marriage
- Types of occupation
- Types of religion
- Population projection

## Clinical Title: Community Health (Clinical)

### Clinical Description:

The focus of this practicum course is to provide learners with an opportunity to strengthen their basic skills. The practicum provides an opportunity for learners to carry out client assessments in a variety of community-based settings so as to develop relevant and appropriate interventions to promote health and prevent diseases amongst individual, families and communities. The practicum allows for collaboration, consultation and forging of partnerships with various stakeholders, referral and continuity of care.

### Clinical Objectives:

At the end of the course the learners will be able to:

- Build effective partnerships with clients in the community
- Conduct a comprehensive assessment of the health needs of all the clients using a number of community assessment frameworks
- Participate in the process of planning, implementing, monitoring and evaluating a health promotion or illness prevention strategy, as a member of a team.
- Work as an advocate for improved and/or needed health resources.
- Network with community partners in serving the health care needs of the clients in the community
- Manage health information on issues and problems related to the health of individuals, families, groups and communities
- Plan for sustainability of implemented health promotion programs

### Clinical Placement Settings:

- Health canthers
- Community
- Schools
- Industries
- Water works and sewerages
- Information office at the hospital and clinic
- SGB Support Units

**Semester III**

- Skills:
  - Community health assessment
  - Documentation and reporting
  - Family health assessment
  - Community mobilization
  - Community project planning and implementation
  - Program evaluation
  - Planning a lesson for health education
  - Micro teaching
  - Use of visual aids
  - Compiling weekly/monthly statistics

**Competencies**

Knowledge	Attitude/Behavior	Skills
<p>Demonstrate understanding of community health frameworks in the process of conducting assessments of clients (individuals, families, groups and communities) health needs</p>	<p>Values assessing health care situations through the eyes of a client</p>	<p>Negotiates successfully community and family entry and adheres to principles of gaining entry to the community and family</p> <p>Develops effective partnership with clients in an ethical manner</p> <p>Generate an appropriate diagnosis that is based on collected data</p>
<p>Demonstrate understanding of the various intervention strategies used to promote health and prevent illness at a community level</p>	<p>Respects client’s rights to make decisions in planning their care and encourages their input into decisions about interventions to be implemented</p> <p>Values individual cultural and personal diversity</p> <p>Accepts the role and responsibility for providing health education to patients and families</p>	<p>Plans and implements community-based health promotion interventions in collaboration with clients and members of the health care team.</p> <p>Mobilises members of the community to represent the community/clients in the project team</p> <p>Develops culturally sensitive health promotion intervention plans/program, which are based on agreed upon priority health need/s</p> <p>Develops a comprehensive project proposal and articulates it clearly detailing each step</p> <p>Mobilizes resources required to execute the community intervention</p>



**Teaching/Learning Strategies:**

- Classroom presentations
- Group exercises
- Educational games
- Demonstration
- Coaching
- Homework and laboratory assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

**Assessment of Learning:**

Formative assessment:

- Group projects:
  - Community needs assessment
  - Epidemiological study
- Evaluation of a health promotion program
- Individual project: Family case study

**Summative Assessment:**

- Observation: Implementation of a health promotion program in the community (Practical)

**References:**

McEwen, M. & Nies, A. M. (2007). Community/Public Health Nursing: Promoting the Health of Populations (4th ed). New York: Saunders

Recommended Readings

Clark, M. J. (2005). Nursing in the community: Dimensions of community health. Appleton & Lange, Stamford, Connecticut.

### Semester III

Nies, M. & McEwen, M. (2006). Community health nursing: Promoting the health of populations. Philadelphia: W. B. Saunders.

Van Wyk, N & Leech, R. (2011) Nursing in the Community. Pearson Education: South Africa.

*Essentials of Demographic Analysis for Africa: Introduction to Public Health and Epidemiology*, 1982, G. M. K. Kpedekpo.

*Setting up community health programs: a practical manual for use in developing countries*, Lankester, 1992

#### **Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Medical Care

**Credits:**

4

**Placement:**

First semester, second year

**Duration:**

16 Weeks (14 instructional and 2 exams)

56 classroom hours

168 clinical hours

**Course Description:**

This course builds on knowledge and skills from fundamentals of midwifery, basic sciences (chemistry, physics, and microbiology) and anatomy and physiology. It enables the learner to gain knowledge and skills to effectively manage adults with medical diseases/conditions. Emphasis is placed on non-communicable diseases and utilisation of knowledge of health care processes. The course will focus on priority medical conditions, especially those that affect pregnancy, labor, delivery and the postpartum in the Africa region.

**Course Objectives:**

- Demonstrate competence in assessment of an adult patient with acute and chronic medical diseases.
- Demonstrate competence in analysis of assessment data in identifying problems of the adult patient with acute and chronic medical diseases.
- Comprehensively manage adult patients based on the essential health package utilizing the appropriate process and primary health care approach.
- Demonstrate knowledge of pharmacologic agents used in the treatment of adults with acute and chronic medical diseases and the management of patients with these disorders.
- Apply psychosocial, cultural, spiritual, ethical and professional values in management of the adult patient with medical and surgical diseases and conditions and support for their families.

**Specific Objectives:**

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

- Explain the basic concepts and terms in medical health

### **Semester III**

- Review the techniques for physical assessment of patients and common diagnostic measurement in medical care:
  - Demonstrate skills in essential procedure in caring for a patient with a medical condition
  - Explain the causes, manifestations and pathophysiology of common disorders that threaten adaptation
  - Identify selected common disorders of the body systems
  - Explain the causes, pathophysiology and clinical features of selected medical disease conditions of the body systems
  - Describe the diagnostic measures used for the selected disorders
  - Utilize health care process/models in the management of patients with the selected conditions
  - Classify and describe burns
  - Manage patients with burns
  - Care for patients with selected medical disorders included oncological conditions
  - Describe the principles and practice of rehabilitation

### **Course Content:**

- 1. INTRODUCTION AND THEORETICAL BASIS OF MEDICAL CARE**
- 2. HISTORY OF MEDICAL CARE AND COMMON TERMINOLOGIES**
- 3. ETHICAL AND LEGAL ISSUES IN THE PROVISION OF MEDICAL CARE**
- 4. CONCEPTS AND THEORIES IN MEDICAL HEALTH:**
  - Common concepts and terms
  - Holistic care
  - Primary care
  - Team care
  - Health – illness continuum
  - Adaptation, homeostasis and stress
  - Behavior in illness

**5. COMMON DISORDERS THAT THREATEN ADAPTATION – DEFINITION, CAUSES, SIGNS AND SYMPTOMS, PATHOPHYSIOLOGY, RELEVANCE, IMPLICATIONS FOR CARE:**

- Inflammation
- Pain
- Fatigue
- Hemorrhage
- Shock
- Fever
- Fluid and electrolyte imbalance
- Asphyxia
- Unconsciousness
- Anxiety
- Fear
- Dyspnea
- Edema

**6. PHYSICAL ASSESSMENT OF PATIENTS AND COMMON DIAGNOSTIC MEASUREMENT IN MEDICAL CARE:**

- Assessment
- History taking
- Physical examination
- Vital signs, weight, height, apex beat and fetal heart beat
- Health screening preparation
- Gastrointestinal contents
- Urine testing
- Stool culture
- Sputum
- High vaginal swab

### Semester III

- Blood: hepatitis, HIV, HB, WBC, etc., grouping and cross matching
- Urea and electrolytes
- X-Ray
- Ultrasound
- Magnetic resonance imaging (MRI), CT scan, etc.

### 7. ESSENTIAL PROCEDURE/CLINICAL SKILLS:

- Assessment of lung functioning
- Suctioning
- Intubation
- Oxygen therapy:
  - By nasal cannula
  - By face mask
  - Nebulising
  - Observing respirations
- Cardio-pulmonary resuscitation:
  - Use of ambu-bag
  - Coughing exercises
  - Administration of bronchodilators
  - Care of the patient with tracheostomy
  - Assessment of the cardiovascular system
  - Blood pressure monitoring
  - Apical-radial pulse
  - Auscultating for heart sounds
  - Controlling epistaxis/nasal packing
  - Exercises and cardiac functioning
  - Cardiac bed
  - Administration of cardiovascular system drugs
  - Patient feeding

- Gastric lavage
- Gastric/tube feeding
- Giving an enema
- Interpreting liver function tests
- Colostomy/ileostomy care
- Flatus tube insertion
- Monitoring bowel sounds
- Administration of oral drugs
- Dental extraction
- Insertion of rectal suppository
- Paracentesis
- Administration of Insulin
- Measuring blood glucose
- Measuring glucose in urine
- Teaching patient self-injection, foot care and nutrition
- Administration of oral hypoglycaemic drugs
- Interpreting complete blood count laboratory results
- Collecting samples for blood culture and sensitivity tests
- Interpreting culture and sensitivity results
- Pre and post-test counselling
- Conducting a HIV rapid test
- Interpreting results for viral load
- Safety precautions in handling blood specimen
- Post Exposure Prophylaxis (PEP)

#### **8. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS WITH RESPIRATORY CONDITIONS AND DISORDERS:**

- Overview of the Respiratory System
- Respiratory assessment
- Upper respiratory tract disorders:

### Semester III

- Pneumonia
- Disease of the bronchia
- Sinusitis
- Asthma
- Chronic obstructive pulmonary disease
- Pneumothorax and haemothorax
- Pleural effusion
- Chest surgery
- Occupational Chest disease
- Closed chest drainage
- Tracheostomy
- Lung cancer

### **9. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF A CLIENT WITH CARDIOVASCULAR DISORDERS AND CONDITIONS:**

- Overview of the Cardiovascular system
- Assessment of the cardiovascular system
- Pathophysiology and electrophysiology of the heart
- Valvular heart diseases
- Vascular problems:
  - Hypertension
- Function problems:
  - Angina pectoris
  - Myocardial infarction
  - Congestive heart failure
  - Dysrhythmias
- Ischemic Diseases:
  - Coronary artery disease
- Haemorrhoids



- Varicose veins
- Epistaxis
- Congenital heart disease and heart failure
- Cardiac arrhythmias
- Diseases of the blood vessels: aneurysms, arteriosclerosis, Raynaud's disease, cardiac arrest

**10. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS WITH GASTROINTESTINAL SYSTEM DISEASES AND CONDITIONS:**

- Overview of the gastrointestinal System
- Assessment of the G.I.T.
- Disorders:
  - Tonsillitis and tonsillectomy
  - Gingivitis
  - Dental caries
  - Stomatitis
  - Thrush
  - Constipation
  - Diarrhoeas
  - Dysentery
  - Cholera
  - Typhoid fever
  - Vomiting
  - Peritonitis
  - Gastritis
  - Duodenal and gastric ulcers
  - Crohn's disease
  - Ulcerative colitis
  - Hepatitis
  - Pancreatitis

### Semester III

- Gall bladder and liver disorders
- Appendicitis and appendectomy
- Hernia and herniorrhaphy
- Intestinal obstruction

### **11. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS WITH ENDOCRINE SYSTEM DISEASES AND CONDITIONS:**

- Overview of the Endocrine System
- Assessment of the endocrine system
- Disorders of the Endocrine System:
  - Hyperactivity and hypoactivity of the endocrine glands
  - Diabetes
  - Thyroid dysfunction
  - Thyroidectomy
  - Cushing's syndrome
  - Addison's disease
- Implications of steroid therapy

### **12. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF PATIENT WITH BLOOD AND IMMUNE SYSTEM DISORDERS:**

- Overview of the Immune System
- Assessment of blood and immune system
- Disorders/diseases of the Blood and immune system:
  - Blood coagulation disorders
  - Blood transfusion
  - Anaemia, sickle cell
  - Immune response
  - Allergies and anaphylactic shock
  - Immunosuppression
  - Immunodeficiency
  - HIV and AIDS

- Haemophilia
- Leukemia
- Haemorrhagic diseases (Ebola, Dengue, etc.)

### **13. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS WITH MUSCULOSKELETAL DISEASES AND CONDITIONS:**

- Overview of the musculoskeletal system
- Assessment of the system
- Diagnostic tests:
  - Disorders/diseases of the musculoskeletal system
  - Skeletal disorders/conditions/diseases:
    - Fractures
- Bone healing:
  - Traction, splints, and casts
  - Arthritis
  - Osteoporosis
  - Osteomyelitis
  - Lumbago
- Muscular disorders/diseases/conditions:
  - Soft tissue injury:
    - Sprains
    - Strains
- Muscular dystrophy
- Gout
- Contractures
- Decubitus ulcer
- Tendonitis
- Amputation
- Dislocations

### Semester III

- Cellulitis
- Skeletal Tuberculosis

#### **14. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS WITH NERVOUS SYSTEM DISEASES AND CONDITIONS:**

- Overview of Nervous System
- Clinical manifestations of neurological problems
- Neurological Problems/Diseases/Disorders:
  - Increased intracranial pressure
  - Congenital problems – spine bifida, meningocoele, anencephaly, myelomeningocoele
  - Cardiovascular accident
  - Head injuries
  - Meningitis
  - Epilepsy
  - Encephalitis
  - Cerebral thrombosis
  - Cerebral hemorrhage
  - Cerebral aneurysm
  - Subarachnoid hemorrhages
  - Epilepsy
  - Herpes zoster
  - Multiple sclerosis
  - Unconsciousness
  - Delirium
  - Dementia
  - Alzheimer's
  - Parkinson's
  - Neoplasms – intracranial tumor, intra-vertebral tumor
  - Numbness and paralysis

- Neurogenic shock
- Cerebral palsy
- Brain tumours
- Rabies

**15. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF THE CLIENTS WITH GENITOURINARY SYSTEM DISEASES AND CONDITIONS:**

- Overview of the genitourinary system
- Assessment
- Disorders/diseases/conditions of the tract:
  - Urinary tract infections
  - Urinary retention
  - Urinary incontinence
  - Cystoscele
  - Renal calculi
  - Renal tumors
  - Renal failure
  - Nephritis
  - Nephrotic syndrome
  - Vesicovaginal fistulae

**16. MANAGEMENT OF CLIENTS WITH REPRODUCTIVE DISEASES AND CONDITIONS:**

- Overview of the reproductive system
- Assessment of the system
- Problems/Disorders/Conditions:
  - Abortion
  - Uterine fibroids and hysterectomy
  - Uterine prolapse
  - Cervical and breast cancer
  - Mastitis and mastectomy

### Semester III

- Sexually transmitted infections (STI)
- Schistosomiasis
- Hydrocele
- Enlarged prostate and Prostatectomy

### **17. ETIOLOGY, CLINICAL MESTATION AND MANAGEMENT OF CLIENTS WITH FLUID AND ELECTROLYTE DISTURBANCES:**

- Body structures involved in maintaining fluid and electrolyte balance
- Assessment and management of fluid and electrolyte imbalances
- Acid – base disturbances (metabolic and respiratory acidosis and alkalosis)
- Electrolyte imbalances
- Fluid imbalances and infusions
- Dehydration and hypovolemic shock

### **18. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS WITH DISORDERS AND CONDITIONS OF THE INTEGUMENTARY SYSTEM:**

- Overview of the integumentary system
- Assessment of the integument
- Skin disorders:
  - Psoriasis
  - Acne
  - Rash
  - Eczema
  - Dermatitis
- Skin injuries and Dressing:
  - Burns:
    - Classification
    - Management
  - Cuts
  - Abrasions
  - Contusions

- Wound dressing
- Skin and mucosal infections:
  - Fungal infections (skin and nail)
  - Scabies
  - Boils/abscesses
- Cancers of the skin:
  - Kaposi's sarcoma
- Other Skin Disorders
- Herpes zoster
- Herpes simplex
- Steven-Johnson's syndrome
- Allergic reactions

#### **19. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF DISORDERS AND CONDITIONS OF SPECIAL SENSORY ORGANS:**

- Overview of sensory
- Assessment of sensory organs
- Conditions affecting sensory organs:
  - Ear:
    - Otitis media
    - Hearing disruptions
  - Nose:
    - Sinusitis
    - Smelling disruptions
  - Eye:
    - Corneal perforation
    - Conjunctivitis
    - Cataract
    - Furuncles
    - Stye

### Semester III

- Refraction errors
- Cancer of the eye

## **20. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF ONCOLOGY (CELL PROLIFERATION) CLIENTS:**

- Review of related structures and functions
- Concepts and terminologies
- Types and characteristics of selected oncological conditions of body system including the Reproductive system
- Related pathophysiology
- Management:
  - Chemotherapy
  - Radiotherapy, etc.
- Role of the provider in oncology
- Neoplasms: cancer and tumors:
  - Definitions and classification
  - Management
  - Drugs
  - Radiotherapy
  - Surgery
- Counseling of patients and their families
- Care of the terminally ill
- Management: positioning, warmth, I.V therapy, etc.

## **21. ETIOLOGY, CLINICAL MANIFESTATION AND MANAGEMENT OF CLIENTS TAKING THE FOLLOWING PHARMACOLOGIC AGENTS:**

- Anticoagulants
- Antibiotics
- Anti-thyroid medications
- AIDS medications
- Bronchodilators



- Electrolyte supplements
- Steroids
- Thyroid supplements
- Anti-cancer drugs

# Medical Clinical Description

This Clinical Course will provide the learner with the opportunity to develop skills and competences necessary for managing adult patients with medical and surgical diseases and conditions. The learner will be able to apply the appropriate process and the primary health care approach in the provision of care to adult patients with medical and surgical diseases and conditions.

## Clinical Course Objectives:

- Demonstrate competence in assessment of an adult patient with medical and surgical diseases and conditions
- Demonstrate competence in preparation for diagnostic assessments done on adult patients with medical and surgical diseases and conditions
- Demonstrate competence in managing patients who are receiving pharmacologic agents used in the treatment of adult patients with medical and surgical diseases and conditions.
- Demonstrate competence in identifying nutritional requirements of adult patients with medical and surgical diseases and conditions.
- Apply psychosocial, cultural, spiritual, ethical and professional values in management of the adult patient with medical and surgical diseases and conditions and support for their families.

## Clinical Skills:

- Assessing respiratory functions
- Suctioning
- Intubating
- Applying Oxygen therapy procedures by Nasal cannula, Face mask, etc.
- Nebulising
- Cardio-pulmonary resuscitation by use of Ambu-bag, palms, etc.
- Teaching Coughing exercises
- Administering bronchodilators
- Assessing tracheostomy site
- Assess cardiovascular functions
- Monitoring Blood pressure

- Measuring Apical-radial pulse

### Competences

Knowledge	Attitudes/Behaviours	Skills
Identifies components of the midwifery process appropriate to individual health care needs	Appreciates the difference between data collection and assessment	Performs physical assessment to identify baseline normal/ abnormal findings
Demonstrates understanding of the diversity of the human condition	Values the inherent worth and uniqueness of individuals and populations	Plans appropriate care for clients and establishes priorities
Understands the concept of accountability for own practice	Shows commitment to provision of high quality, safe and effective patient care	Safely performs learned skills to adult clients with medical and surgical conditions
Understands the principles of teaching and learning	Accepts the role and responsibility for providing health education to patients and families	Identifies client learning needs and formulates a plan for teaching
Understands the principles of effective communication through various means	Accepts responsibility for communicating effectively	Demonstrates effective communication skills in order to obtain data for client assessment and share pertinent information
Demonstrates knowledge of basic scientific methods and processes regarding the administration of medicines	Appreciates the strength of scientific bases for practice	Correctly and accurately administers medications
Integrates objective data with knowledge gained from an assessment of the subjective experiences of the patient and his/her family	Values the midwifery process as a means of identifying and meeting individualised needs of the client and his/her family	Documents appropriate information regarding the health status of medical-surgical patients according to school/agency policies
Identifies contributions of other individuals and groups in helping patients and families achieve health goals	Respects the centrality of the patient and family as core members of the health care team	Incorporates other health care members or family into client care

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### Teaching and Learning Strategies:

- Lecture
- Group discussions
- Enquiry based learning
- Directed and self-directed learning
- Role play
- Simulations

### Semester III

#### Course Expectations:

The student is expected to:

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

#### Assessment:

- Written Exams
- Logbook
- Care plans
- Group presentations
- Quizzes

#### Course Assessment:

- Summative Assessment
- Mid-Term and Final Examination

#### References:

Smeltzer, Susanne C. & Bare, Brenda G. (2000). Brunner & Suddarth's textbook of medical-surgical nursing: USA: Lippincott Williams & Wilkins.

Regional Professional Regulatory Framework ICN, 2010

Gray, JAM, (2012). Evidence-based health care. Edinburgh. Churchill Livingstone

Hargrove – Huttel RA Medical – Surgical Nursing. 3rd ed. Philadelphia: Lippincott 2001

Kozier B, Erb, G Berman, A. & Burke K. (2008). Fundamentals of nursing: concepts, process & procedure

Robinson, J. (2005) Essentials of health and wellness. New York: Thomson ; Delmar Learning.

Regional Professional Regulatory Framework  
ICN, 2010

#### Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Midwifery II

**Credits:**

4

**Placement:**

First semester of second year

**Duration:**

16 Weeks (14 Weeks instructional and 2 exams)

56 hours classroom

168 hours clinical

**Pre-requisites:**

Basic Math, Bas English, Fundamentals Of Midwifery , Anatomy & Physiology I & 2, Integrated Basic Sciences, Psychology & Sociology, Basic Nutrition, Ethical And Professional Adjustment, Health Assessment, Midwifery I, Epidemiology Demographics (PHCII), Pharmacology & Drug Calculations, Medical Care.

**Course Description:**

This Course is designed so as to enable the student to develop competence in the provision of culturally sensitive care for women, newborn and families during preconception and pregnancy, labor and delivery, the postpartum and newborn periods. Students will be equipped with knowledge of the physiology of and management of pregnancy and fetal monitoring, labor and delivery, including, the use of the partograph to prevent and timely detect, complications, conduct normal deliveries and provide postnatal care for women, essential care for newborns, as well as, caring for their families.

**Broad Objectives:**

At the end of this course, the student will:

- Manage the antenatal patient and fetus, including intrauterine and external fetal monitoring
- Understand the physiology of labor in investigating, analysing, monitoring, managing and evaluating care of a woman in labor.
- Explain the midwifery management process and decision – making framework in managing the pregnant women as well as women in labor and the postpartum period without complications.
- Apply the midwifery process in the management of women during labor and delivery
- Discuss postpartum care of the mother and essential newborn care

### Semester III

#### **Specific Objectives:**

At the end of the course the student will be able to:

- Describe antenatal factors affecting maternal and newborn mortality and morbidity
- Apply knowledge of anatomical and physiological principals to the care of women throughout pregnancy
- Describe the normal progression of pregnancy for the woman and her developing foetus
- Describe normal fetal growth and development throughout pregnancy
- Apply principles of health assessment to the care of women during pregnancy
- Apply principles of communication, health education and counseling to the care of women and families during pregnancy, including information on identification of danger signs, birth preparedness and complication readiness
- Support the wellbeing of the mother and the fetus through promotion of optimal care including nutrition throughout pregnancy
- Describe focused antenatal care (FANC)
- Describe basic elements of FANC assessment and routine care for the pregnant women, including the prevention of malaria and PMTCT
- Describe the elements of Birth Preparedness and Complication Readiness
- Demonstrate the provision of focused antenatal care he components o
- List the components of a new and repeat antenatal visit
- Describe comfort measures used to relieve common complaints of the pregnant woman
- Record findings accurately and completely for each antenatal visit
- Identify and conduct a physical assessment of a women in Labor, including obtaining a medical and obstetrical history
- Performing pelvic assessment and vaginal examination and analyze findings.
- Demonstrate skills of fetal monitoring, analyse findings and manage appropriately
- Demonstrate how to record patient's findings on the partograph and analysing the partograph
- Describe essential physical and psychosocial care for the women in labor
- Conduct a Normal delivery

- Demonstrate Active management of the third stage of labor (AMTSL)
- Provide emergency neonatal care, including neonatal resuscitation focusing on Helping Baby Breathe (HBH) tasks.
- Describe each component of the APGAR Score
- Prescribe and administer routine pharmacological agents use during labour and delivery for mother and baby
- Provide immediate postpartum care for the mother and baby including postpartum IUCD insertion and chlorhexidine to cord and eye care for the newborn
- Identify normal physiologic changes in the reproductive system of the postpartum mother, including involution and lactation
- Describe normal psychological changes in a postpartum mother
- Describe physiological changes for adaptation to extrauterine life, immediate care needs of the newborn, and characteristics of healthy newborns with common variations
- Conduct a physical assessment of the postpartum mothers and a newborn
- Conduct patient education sessions with the mother to enable her to care for herself and the baby

**Course Content:**

**Unit I | Application of Reproductive Anatomy and Physiology to 1. Pregnancy**

**1. COMMON TERMS**

**2. CONCEPTS AND THEORIES**

**3. ANATOMY AND PHYSIOLOGY OF THE REPRODUCTIVE SYSTEM IN RELATION TO PREGNANCY**

**4. CHANGES IN PREGNANCY:**

- Reproductive organs
- Cardiovascular
- Respiratory
- Renal
- Gastrointestinal

### **Semester III**

- Musculoskeletal
- Neurological
- Psychosexual

### **5. PHYSIOLOGY OF CONCEPTION**

### **6. FETAL DEVELOPMENT**

### **7. PLACENTAL DEVELOPMENT**

## **Unit II | Midwifery Care during the Antenatal Period-The First Visit**

### **1. FOCUSED ANTENATAL CARE (FANC):**

- Goal: to promote maternal and newborn health and survival through:
  - Identification and treatment of existing health problems
  - Early detection of complications and/or diseases arising during pregnancy
  - Birth preparedness and complication readiness
  - Health promotion and disease prevention
  - Basic elements of FANC assessment and care
  - The elements of Birth Preparedness and Complication Readiness
  - The provision of focused antenatal care
  - Diagnosis of pregnancy
  - Estimating gestational age
  - Initial prenatal history
  - Initial prenatal physical examination
  - Laboratory testing
  - Education and counseling of woman and family
  - Nutritional guidance
  - Managing common discomforts- Hyperemesis gravidarum
  - Women's nutrition and supplementation (multivitamin, iron/folate)
  - Family planning
  - Prevention of Malaria in Pregnancy



- Focus on two of the three main WHO MIP components:
  - Use of insecticide-treated nets (ITNs)
  - Intermittent preventive treatment (IPTp):
    - The first IPTp-SP dose should be administered as early as possible during the second trimester of gestation
    - Each IPTp-SP dose should be given at least one month apart
    - The last dose of IPTp-SP can be administered up to the time of delivery, without safety concerns
    - IPTp should ideally be administered as Directly Observed Therapy (DOT)
    - SP can be given either on an empty stomach or with food
    - Folic Acid at a daily dose equal or above 5 mg should not be given together with SP as this counteracts the efficacy of SP as an anti-malarial. Therefore, WHO Recommended dose of folic acid for daily supplementation in pregnancy is 0.4 mg. This dose may be safely used in conjunction with SP
    - Folic acid at a daily dose equal or above 5mg should not be given together with SP as this counteracts its efficacy as an antimalarial
    - if 0.4mg of folic acid is not available and the 0.5mg tablet is used, folic acid ( $\geq 5\text{mg}$ ) may be withheld for 2 weeks following IPTp-SP administration
    - SP should not be administered to women receiving Cotrimoxazole prophylaxis
  - Before administration of SP check:
    - Dosage
    - When to Give
    - Essentials before administering-note contraindications
    - Contraindications of SP
- Screening for acute and chronic diseases affecting pregnancy:
  - HIV in pregnancy and PMTCT:
    - Risk of MTCT during pregnancy, labor and delivery, and breastfeeding
    - Ways to reduce risk of MTCT:
      - Use of antiretroviral medicines for mother and infant
    - Condom use (male and female):
      - How to use a male and female condom using models
    - Special precaution during labor and delivery
    - Infant feeding options

### **Semester III**

- Care for the mother during and after childbirth
- TB
- Opportunistic infections (signs and symptoms of TB)
- Referral to national TB program if there are signs and symptoms of TB or report of TB on close family members or If woman in clinical stage III or IV refers for further management
- Syphilis
- Documentation of care

## **Unit III | Midwifery Care during the Antenatal Period – The Return Visit**

### **1. MIDWIFERY ACTIVITIES**

### **2. PRENATAL HISTORY TAKING AND PHYSICAL EXAMINATION:**

- Obtained Information on:
  - Gravida
  - Parity
  - Number of Abortions
- Number of Children Living:
  - Previous Obstetrical History- prematurity, postmaturity, C/sections, still births, PPH, etc.
- Check:
  - Fundal height
  - Fetal position
  - Fetal heart rate
  - Extremities
  - Blood pressure

### **3. LABORATORY TESTING**

### **4. EDUCATION AND COUNSELING OF WOMAN AND FAMILY**

### **5. NUTRITIONAL GUIDANCE**

**6. MANAGING COMMON DISCOMFORTS**

**7. SCREENING FOR ACUTE AND CHRONIC DISEASES AFFECTING PREGNANCY:**

- Hypertension
- Diabetes
- HIV
- TB
- Malaria

**8. SCREENING FOR & INITIAL MANAGEMENT OF COMPLICATIONS DURING PREGNANCY:**

- Gestational diabetes
- Premature labor
- Fetal growth restriction
- Macrosomia
- Postdates pregnancy
- Preeclampsia/eclampsia
- Bleeding in early and late pregnancy

**9. DOCUMENTATION OF CARE**

**Unit IV | Anatomy and Physiology of the Reproductive System in Relation to Labor and Delivery**

- Related terminologies
- Anatomy of the pelvis
- Fetal anatomy and physiology

**Unit V | Normal Labor and Delivery**

**1. PHYSIOLOGICAL PROCESS OF LABOR:**

- Common terms:

### **Semester III**

- Power, passage and passenger
- Signs of labor/diagnosis of labor
- Onset of labor
- The Stages of Labor:
  - First stage
  - Second stage
  - Third stage
  - Fourth stage

### **2. DOCUMENTATION OF CARE**

### **3. COLLABORATION WITH OTHER HEALTH PROFESSIONALS**

### **4. COUNSELING AND EDUCATION OF FAMILY**

## **Unit VI | Midwifery Care during the First Stage of Labor**

### **1. THE PHYSIOLOGY AND MANAGEMENT OF FIRST STAGE OF LABOR:**

- Diagnosis of labor
- Physical assessment during labor:
  - Medical history and examination
  - Obstetrical history and examination
  - Documentation during labor
  - Screening for maternal and newborn risk factors:
    - HIV, TB, Malaria, Syphilis, Hepatitis B
    - Small for gestational age (SGA)
    - Macrosomia
    - Prematurity/postmaturity

### **2. MONITORING OF LABOR USING PARTOGRAPH/ USE OF THE PARTOGRAPH:**

- Management Of The Latent Phase Of Labor
- True And False Labor
- Management Of The Active Phase Of Labor

- Monitoring Maternal And Fetal Well-Being During Labor
- Physiology of uterine contractions
- Dilation, effacement and descent
- Determining fetal position
- Monitoring descent and effacement

**3. SUPPORTING PHYSIOLOGIC AND PSYCHOSOCIAL NEEDS DURING LABOR:**

- Nutritional needs
- Hydration
- Comfort measures/pain management
- Companionship
- Anxiety

**Unit VII | Midwifery Care during the Second and Third Stages of Labor**

**1. THE PHYSIOLOGY AND MANAGEMENT OF SECOND STAGE OF LABOR:**

- Conducting a clean and safe delivery:
  - Maternal positioning
  - Delivery equipment and supplies
  - Delivery hand maneuvers
  - Protecting the perineum
  - Prevention of perineal tears
  - Episiotomy
- Mechanisms of birth
- Delivery of the baby:
  - Emergency neonatal care
  - Neonatal resuscitation- Helping Baby Breathe (HBH) tasks
  - APGAR Score

### Semester III

- Immediate essential care of the new born:
  - Drying and warmth
  - Cord clamping
  - Initiation of breast feeding

## 2. THE PHYSIOLOGY AND MANAGEMENT OF THIRD STAGE OF LABOR:

- Active management of third stage of labor (AMTSL):
  - Administration of uterotonics:
    - Oxytocin or misoprostol
  - Perform control cord traction
  - Check uterus tone and massage softly if needed
  - Examination of placenta and membranes
  - Check bleeding
  - Inspection and repairs of lacerations and episiotomy
  - Observed mother and baby

## Unit VIII | Midwifery Care during the Fourth Stage of Labor in the Immediate Postpartum Period

- The Physiology and management of the fourth stage of labor
- Repair of episiotomy, tears and lacerations
- Prevention of Postpartum hemorrhage
- PPFPP/PPIUCD

### 1. IMMEDIATE CARE/ESSENTIAL CARE OF THE NEWBORN AT DELIVERY:

- Thermal regulation
- Cord care-chlorhexidine
- Eye care
- Breastfeeding within the first hour

## Unit IX | The Postpartum Period

### 1. DEFINITION AND DESCRIPTION

**2. FACTORS AFFECTING MORBIDITY AND MORTALITY**

**3. IMMEDIATE CARE AND POSTPARTUM VISITS:**

- Conducting the return visit:
  - 7-14 days and 6 weeks

***The Mother***

**4. PHYSIOLOGIC CHANGES IN THE POSTPARTUM PERIOD:**

- Uterus-involution
- Lochia
- Vagina and perineum
- Breasts
- Weight loss
- Bladder/urinary output
- Hematological
- Neurological

**5. PSYCHOLOGICAL CHANGES IN THE POSTPARTUM PERIOD:**

- Role Change
- Attachment
- Baby blues

**6. PHYSICAL ASSESSMENT OF THE POSTPARTUM WOMAN:**

- Recording Care
- Postnatal assessment:
  - Taking A Postpartum History
  - Laboratory Examination:
    - Physical exam

**7. MANAGING POSTPARTUM DISCOMFORTS**

**8. COUNSELING THE POSTPARTUM MOTHER AND FAMILY**

**Semester III**

**9. PARENT EDUCATION:**

- Danger Signs for the mother and newborn
- Care Of The Newborn
- Family Planning – Postpartum Family IUD, LAM
- Nutrition- Breastfeeding, ENA
- Prevention of infection for mother and baby

**10. POSTPARTUM FAMILY PLANNING COUNSELING AND SERVICES**

***The Newborn***

**11. REVIEW PHYSIOLOGIC TRANSITION TO EXTRA-UTERINE LIFE:**

- Cardiac
- Circulatory
- Respiratory
- Hematologic
- Immune system
- Gastrointestinal
- Renal

**12. PHYSICAL ASSESSMENT OF THE NEWBORN:**

- Normal Newborn Growth and Development

**13. ROUTINE CARE OF THE NEWBORN:**

- Bathing
- Male Neonatal Circumcision
- Sleep

**14. FEEDING OF THE NEWBORN- EXCLUSIVE BREAST FEEDING**

**15. MINOR DISORDERS OF THE NEWBORN:**

- Colic

**16. DANGER SIGNS AND REFERRAL**

**17. PROMOTING NEWBORN SAFETY**



# Midwifery II Clinical

## Clinical Course Description:

This clinical course will enable the learner to develop relevant skills required for the provision of quality midwifery care. Emphasis will be placed on the diagnosis of pregnancy and labor, history taking, assessment and monitoring the pregnancy, fetal development, stages of labor including maternal and fetal wellbeing, conducting the delivery and providing care to the mother and newborn.

## Clinical Objectives:

Upon completion of the clinical course, the learner will be able to:

- Assess and identify clients in labor and manage them appropriately.
- Use the partograph when managing women in normal labor

## Clinical Skills:

- Recording health History and physical examination findings
- Monitoring of first stage of labor using the partograph
- Managing the second and third stages of labor
- Preventing complications during the processes of labor and delivery

## Clinical Placement:

- Labor Ward
- Antenatal Clinic
- Community

## Resources:

- Gloves
- Plastic Apron
- Infant weighing scale
- Medication
- Fetoscope
- Stethoscope
- BP Machine

## Semester III

- Delivery set

## Competencies

Knowledge	Attitudes/Behavior	Skills
<p><b>The midwife has the knowledge and/or understanding of:</b></p> <ul style="list-style-type: none"><li>– The community and social determinants of health (e.g., income, literacy and education, water</li><li>– Supply and sanitation, housing, environmental hazards, food security, disease patterns, common threats to health)</li><li>– Principles of community-based primary care using health promotion and disease prevention and control strategies</li><li>– Direct and indirect causes of maternal and neonatal mortality and morbidity in the local</li><li>– Community and strategies for reducing them</li></ul>	<p><b>The Midwife:</b></p> <ul style="list-style-type: none"><li>– Is responsible and accountable for clinical decisions and actions</li><li>– Acts consistently in accordance with professional ethics, values and human rights</li><li>– Acts consistently in accordance with standards of practice</li><li>– Maintains/updates knowledge and skills, in order to remain current in practice</li><li>– Uses universal/standard precautions, infection prevention and control strategies, and clean technique</li><li>– Behaves in a courteous, non-judgmental, non-discriminatory, and culturally appropriate</li><li>– Manner with all clients</li></ul>	<p><b>The midwife has the skill and/or ability to:</b></p> <ul style="list-style-type: none"><li>– Engage in health education discussions with and for women and their families</li><li>– Use appropriate communication and listening skills across all domains of competency</li><li>– Assemble, use and maintain equipment and supplies appropriate to setting of practice</li><li>– Record and interpret relevant findings for services provided across all domains of</li><li>– Competency, including what was done and what needs follow-up</li><li>– Comply with all local reporting regulations for birth and death registration</li><li>– Take a leadership role in the practice arena based on professional beliefs and values</li></ul>

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## Teaching/Learning Strategies:

- Classroom presentations
- Case studies
- Role plays
- Group exercises
- Demonstration and return demonstration
- Simulations
- Coaching
- Role plays
- Homework and laboratory assignments

- Care plan

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Complete all clinical hours
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class, laboratory and clinical practicum
- Complete all assignments and examinations on due dates

**Assessment:**

- Written exams
- Case study
- Procedure evaluation
- Practical exams
- Clinical performance checklists/logbook
- OSCE

**Required Resources:**

*Myles Textbook for Midwives*, 15th Ed., D. Fraser, M. Cooper, 2009.

*Midwifery: Preparation and Practice*, S. Pairman, J. Pincombe, C. Thorogood, S. Trace, 2006.

*Varney's Midwifery*, 4th Ed., H. Varney, 2004

*Anatomy and Physiology for Midwives*, J. Coad, 2005.

Davidson, M., London, M., Ladewig, P. (2008) *Olds' Maternal-Newborn Nursing & Women's Health Across the Lifespan* (8th ed.) Upper Saddle River, N. J.: Pearson Education, Inc. ISBN: 978-0-13-220873-4

BLSS Modules , fourth edition

Kenner, C. & Lott, J.W. (2007). *Comprehensive neonatal care (4<sup>th</sup> Edition)*. Edinburgh: Elsevier Ltd.

Dare, A. (2003). *A practical guide to working with babies*. Cheltenham: NelsonThornes Ltd.

World Health Organization. 2003. *Integrated management of pregnancy and childbirth: managing complications in pregnancy and childbirth: A guide for midwives and doctors*. WHO Library

### **Semester III**

Learning guides

LBNM- Interdisciplinary Procedure Manual 2013

MOHSW National guidelines and protocols (MNH )

#### **Assessment:**

- Formative assessment: Case study, procedure evaluation
- Summative assessment: Practical exam, clinical performance, OSCE.

#### **Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Emergency Preparedness and Disaster

**Course Credits:**

2

**Placement:**

Second year, First semester

**Duration:**

16 Weeks (14 instructional and 2 for exam)

28 hours each of Theory

28 Lab. Hours

56 Clinical hours

**Pre-requisites:**

Anatomy and Physiology; Introduction to Primary Health Care, Fundamentals of Midwifery and successful completion of freshman year one

**Course Description:**

This course is designed to prepare the learner to work in collaboration with others in handling natural and manmade disasters, large-scale incidents or attacks and any other type of mass casualty event, this course will also prepare learners to act as leaders during times of disaster, focusing on midwifery care/reproductive health in educating and preparing others for potential emergencies, as well as, to develop disaster practices and procedures within healthcare facilities.

**Course Objectives:**

By the end of this course, the student will:

- Understand the concept of disaster management, its scope and the nature of disaster and emergency
- Apply basis principles in meeting the roles and responsibilities of the midwife as part of the disaster management teams and stakeholders in disaster management
- Plan for and manage patients during an emergency/disasters

**Specific Objectives:**

By the end of this course the student would be able to:

- Discuss the concept of emergency preparedness and its application to community health and safety
- Identify and apply preventive measures to reduce the negative impact of disasters

### **Semester III**

- Describe strategies for working with the community and its members to reduce health and safety risks of disasters by establishing a community emergency preparedness team
- Develop a community emergency preparedness plan
- Identify potential accident situations and suggest/implement appropriate safety measures
- Develop educational materials and presentations that describe the health and safety risks associated with potential accidents within the community and the ways in which these risks can be reduced
- Explain the role of the midwife during a disaster
- Describe the basic techniques in emergency care
- Enumerate the common medical emergencies seen in Liberia
- Demonstrate the ability to manage emergency conditions
- Describe disaster management of various emergency situations

### **Course Content:**

## **Unit 1 | Emergency Preparedness**

### **1. CONCEPTS AND FRAMEWORKS OF DISASTER MANAGEMENT**

### **2. PATIENT ASSESSMENT**

### **3. PATIENT TRIAGE:**

- Emergency room staff management

### **4. ENVIRONMENTAL DISASTERS:**

- Landslides
- Earthquakes
- Plane crashes
- Fire outbreaks
- Accidents
- Drowning
- Poisoning

**5. DISASTER MANAGEMENT:****6. CONSTITUENTS OF THE “PREPAREDNESS” PARADIGM:**

- Prevention Preparedness Response:
  - Stabilization of injuries
  - Wound treatment
  - Resuscitation
  - Referral of victims
- Recovery:
  - The “all-hazards” model:
    - Preparedness and response activities for various natural disasters, accidents and emergencies are more alike than they are dissimilar
    - Necessary local activities are essentially the same for all

**7. A SINGLE PLAN, WITH MINOR VARIATIONS, CAN BE USED TO ADDRESS THE MAJORITY OF EMERGENCIES POTENTIAL PARTICIPANTS IN EMERGENCY PREPAREDNESS:**

- Health care personnel
- Role in nursing and midwifery
- Doctors
- Environmental Health Technicians
- Police
- Fire fighters
- Hazmat specialists
- Government representatives, MOH, etc.
- Community members

**8. STEPS IN OPTIMIZING AN EMERGENCY PREPAREDNESS PLAN EMPLOYING THE ALL-HAZARDS MODEL:**

- Identify hazards/emergencies facing the community
- Take action to reduce or eliminate, where possible

### **Semester III**

- Identify component activities necessary to mitigate the remaining threats, if they arise--e.g., alerting key community members, mounting immediate response, meeting medical needs, transportation/evacuation, notifying distant authorities/hospital facilities
- Develop an overall plan
- Organize, train and equip participants
- Run exercises
- Evaluate and improve plan

### **9. PRIMARY GOALS OF PREPAREDNESS PLANS:**

- Reduce:
  - Death
  - Injury
  - Disease risk
  - Destruction of property and community and environmental resources
- Restore basic needs:
  - Physical
  - Psychological
  - Mental
  - Counseling
  - Water
  - Food
  - Shelter/clothing
  - Sanitation
  - Medical care
  - Safety and security
- Recover health, safety and well-being in the community and its members:
  - Family re-unification

### **10. EMERGENCY CARE:**

- Description



- Scope
- Basic Principles
- Activities
- Triage:
  - Patient assessment
  - Emergency room staff management:
    - Stabilization of injuries
    - Wound treatment
- Management of Medical/Surgical emergencies:
  - Cardiac arrest
  - Cardio-vascular accidents
  - Asthma
  - Diabetic coma
  - Convulsive attacks
  - Poisoning
  - Chemical ingestions
  - Acute abdomen
  - Intestinal obstruction
  - Drowning
  - Aspiration
  - Burns
  - Poisoning
- Management of Pediatric emergencies
- Management of Psychiatric emergencies Basic techniques: airway and pulmonary resuscitation, cardio-pulmonary resuscitation, control of hemorrhage, prevention of shock, management of injuries
- Medical emergencies: cardiac arrest, cerebro-vascular accident, asthma, diabetic coma, convulsive attacks, acute abdomen, alcoholic coma , poisons, snake bites, bleeding, shock
- Role of the midwife in emergency preparedness and disaster management

## Clinical Course Description

This course will equip the learner with knowledge, skills and attitude in caring for patients in emergencies in the hospital and community using the appropriate process.

### **Clinical Objectives:**

At the end of this course, the learner will be able to:

- Learn the importance of a quick head-to-toe assessment
- Compare and contrast normal body functioning with that of pathological variations.
- Begin to show an understanding of diagnostic tests, the necessary preparation and appropriate action following each test.
- Describe the role of the family when dealing with an emergent case.
- Relate the appropriate concepts of drug therapy and basic midwifery skills.
- Learn the importance of prioritizing each patient as they enter the emergency system.
- Begin to understand the importance of discharge teaching in the ER setting.
- Relate the appropriate concepts of medical terminology, drug therapy, psychosocial and spiritual implications.
- Identify, assess and evaluate the observations and actions indicated in each disease or disorder of focal patients.

### **Clinical Placement:**

- Emergency Room
- Intensive Care Units
- Operating room

### **Clinical Skills:**

- Admission care in the E.R.
- Assessment of medically ill patient
- Accuracy in taking the vital signs and the need of continuous monitoring
- Taking ECG
- Medication Administration

- Placing NGT, Foley Catheter, Intubation etc.
- Nebulizing and Suctioning
- Fetal heart monitoring

### Competencies

Knowledge	Attitude/Behavior	Skills
<p>Understands responsibilities inherent in being a midwife in disasters and emergencies</p> <p>Recognizes the relationship between midwifery care and emergency and disasters</p>	<p>Recognizes the need for the midwife in emergency and disasters</p> <p>Values and upholds primary midwifery principles and processes during disasters and emergencies</p> <p>Recognize midwifery limits to one's scope</p>	<p>Apply midwifery principles and processes during disasters and emergencies</p>
<p>f caring for patients during disasters and emergencies</p>	<p>Recognizes the value of midwifery in disasters and emergencies</p> <p>Accepts accountability for midwifery care provided by self during emergencies and disasters legated to others</p>	<p>Participates in the process to improve patient care, during emergencies and disasters</p> <p>Assigns, directs, and supervises ancillary personnel and support staff in carrying out particular roles/functions aimed during emergencies and disasters</p>
<p>Identifies contributions of other members of the health team during emergencies and disasters</p> <p>Describes strategies for identifying and managing overlaps in team member roles and accountabilities during emergencies and disasters</p>	<p>Respects the centrality of the patient and family as core members of any health care team</p> <p>Respects the unique professional and cultural attributes that members bring to a team</p>	<p>Assumes the role of team member or leader based on the situation</p> <p>Initiates requests for assistance</p>

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### Teaching and Learning Strategies:

- Lecture
- Group discussions
- Role play
- Simulations

### Semester III

#### Course Expectations:

The student is expected to:

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

#### References:

Tener Goodwin Veenema, 2007. Disaster Nursing & Emergency Preparedness for Chemical, Biological and Radiological Terrorism and other hazards. 2ed.

Linda Young Landesman, 2005. Public Health Management of Disaster: A practice guide.

Tener Goodwin, Ready RN: Handbook for Disaster Nursing and Emergency preparedness

#### Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# **Semester IV | Course Outline**

**Teaching in Midwifery**

**Midwifery III**

**Surgical Care**

**Psychiatric Mental Health**

**Pediatrics I**



# Course Title: Teaching in Midwifery

**Credits:**

3

**Placement:**

Second semester of second year

**Duration:**

16 Weeks (14 instructional and 2 exams)

42 hours classroom

42 hours practicum

**Introduction/Course Description:**

This course equips the learner with knowledge and skills in the principles and techniques of teaching and learning in the classroom and in clinical practice and its application to teaching midwifery students. This course is also designed equip the students with knowledge and skills in patient education and to show the relationship between student education and patient education and the use of common principles in promoting learning of both students and patients. It also enlightens the student on the challenges, approaches, and various dynamics of teaching and learning. This course highlights the essentials of preparation, interactive learning and student assessment.

**Course Objectives:**

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

- Adopt, practice and demonstrate skills and principles of effective teaching and learning for students and patients by being able to:
  - Describe the foundations of educating healthcare providers
  - Utilized effective approaches to teaching and learning
  - Develop learning objectives
- Create a positive learning environment:
  - Effectively plan for teaching
  - Deliver interactive presentations
  - Facilitate the development of health care delivery skills
  - Prepare for and use Knowledge and skills Assessments

**Specific Objectives:**

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

- Identify challenges in educating healthcare providers

## Semester IV

- Describe characteristic of an effective teacher
- Describe the concept of competency-based training
- Describe a variety of competency-based training approaches
- Describe the theories that support competency-based training
- Identify and discuss the various characteristics of adult learning
- Explain the basic principles of adult learning
- Describe the 3 learning domains
- Identify and organize the component of a correctly written learning objectives
- Develop learning objectives
- Describe how to create a positive learning environment
- Describe the 3 major learning styles
- List and discuss factors contributing to successful teaching
- Describe the main components of a clinical skills course
- Discuss the various strategies of teaching utilized in the classroom and clinical setting
- Demonstrate the use of learning technology and use of visual aids to promote learning
- Describe basic techniques for interactive presentation
- Outlined the basic steps in the teaching and learning process
- Describe the process of developing competency in classroom and clinical setting
- Describe tips for developing knowledge, skills and attitudes in learners
- Describe the process for teaching psychomotor, clinical decision making and communication skills
- Summarized important task for the teacher in teaching a clinical skills course in the class room and health facility
- Describe important factors to consider when teaching in clinical setting
- List and explain the four dimensions of assessment
- Apply the concepts of measurement and evaluation to the formative and summative assessment of students



- Select methods for assessing the knowledge and skills of students
- Demonstrate the use of the various methods used in assessing knowledge and skills of students
- Construct high quality test items designed to measure basic knowledge and clinical decision making skills
- Examine the opportunities and challenges associated with construction items such as portfolios, essays and oral exams
- Develop a plan for ensuring that instructional objectives are tied to assessment measures
- Analyze items using readily available and simple statistical methods
- Develop OSCE stations for assessment of student core competencies in participating teaching institutions
- Discuss the concept of clinical teaching at the bedside
- Outline basic rules for bedside teaching
- Describe and use effective instructional strategies use for bedside teaching
- Describe and apply the five “microskills” used in a clinical teaching session
- Discuss the approaches and plans of health education
- Discuss and demonstrate an interactive process for conducting health education

### **Course Content:**

## **Unit I**

### **1. FOUNDATIONS FOR EDUCATING HEALTH CARE PROVIDERS:**

- Teaching And Learning Theories
- Factors Needed For Effective Teaching And Learning
- Challenges In Educating Health Care Providers
- Effective Approaches To Effective Teaching And Learning
- Competency based Training/Learning:
  - Demonstrating the skills
  - Building competency in learners

## **Semester IV**

- Providing practice and feedback
- Assessing competency
- Competency based theories:
  - Adult learning theory
  - Humanistic Learning theory
  - Apprenticeship theory
  - Participatory learning
  - Deep learning
  - Experiential learning
  - Problem based learning
  - Mastery learning
  - Lifelong learning

### **2. CHARACTERISTICS OF THE ADULT LEARNER:**

- Common characteristics:
  - Self-directed
  - Lifetime of experiences
  - Continuum of adult developmental task
  - Life problems
- Effects of illness on adult learning characteristics

### **3. FACTORS CONTRIBUTING TO SUCCESSFUL TEACHING:**

- Relevance
- Motivation
- Active participation
- Learning environment
- Practice and review
- Expectations
- Time and timing

#### **4. THREE LEARNING STYLES:**

- Visual
- Auditory
- Kinesthetic

## **Unit II | BASIC STEPS IN THE TEACHING-LEARNING PROCESS**

### **1. LESSON PLANNING:**

- Developing goals and objectives
- Selecting instructional strategies:
  - Individual or Group Teaching
  - Interactive Presentation
  - Panel Discussion
  - Role Play
  - Study Trip
  - Lecture/discussion
  - Use of audiovisual materials
  - Use of printed materials

### **2. CLASSROOM MANAGEMENT**

### **3. PARTS OF A LESSON/SESSION/PRESENTATION PLAN:**

- Objectives
- Teaching strategies
- Implantation
- Introduction:
  - Main Points/Questions
- Summary

## Semester IV

- Assessment:
  - The facilitation process:
    - Introduction:
      - Clear
      - Share learning objectives
- Facilitate:
  - Use questions
  - Use audiovisual equipment
  - Provide feedback
  - Assess understanding
- Summarize:
  - Effectively
  - Creatively

## Unit III | Developing Educational Goals and Objectives

- Definition:
  - Goals
  - Objective
- Role of objectives in teaching
- Three learning domains:
  - Knowledge/cognitive
  - Skills/psychomotor
  - Attitude/affective
- The 2 levels of objectives:
  - Course objectives:
- 4 parts of a course objective:
  - **When** to demonstrate the knowledge or perform the skill and conditions under which behavior will take place (After completing this course).
  - **Who** will demonstrate competency (the student).

- **What** will be demonstrated or perform or Actual behavior learner exhibits(action verbs – assist, administer, insert).
- **How** will success be measure or Specific criteria used to measure success
- Supporting objective/specific objective/instructional objective:
  - 2 parts of a supporting objective:
    - Specific action to be taken (see action verbs in Table 2-1)
    - Object of the action (the specific content the students are expected to know or demonstrate)

## Unit IV | Clinical Skills Course

- Strategies for Teaching a clinical skills course:
  - Components of a clinical skills course
  - Factors to consider
  - Key task of the teacher in a clinical skills course
- Types of teaching strategies:
  - Brainstorming
  - Case Study
  - Clinical Simulation
  - Demonstration/return demonstration
  - Discussion
  - Facilitated Practice
  - Game
  - Guest Speaker
  - Individual or Group Teaching
  - Interactive Presentation
  - Panel Discussion
  - Role Play
  - Study Trip
  - Lecture
  - Lecture/discussion

## Semester IV

- Audiovisual material
- Use of printed material

## Unit V | Student Performance Assessment

- Four dimensions of assessment:
  - Biophysical
  - Psychological
  - Sociocultural
  - Environmental
- Types of Assessments:
  - Formative/Short-term evaluation techniques
  - Summative/Long term evaluation techniques
  - Concepts of measurement, evaluation, validity and reliability
  - Factor in selecting types of assessment
  - Assessment methods:
    - Drills, quizzes, and practice tests
    - Written exercises
    - Case studies
    - Project reports
    - Essay examinations
    - Objective written examinations
    - Oral examination
    - Clinical rounds
    - Direct observation
    - Structured feedback reports
    - Logbooks (casebooks), learning journals, and care plans
    - Structured practical examinations
- Test Construction:
  - Basic Steps for Developing a Test Aligned to the course
  - Objective Structured Practical Exam (OSCE)

## Unit VI | Concept of Clinical Teaching at the Bedside

- Description of bedside teaching
- Goal of bedside teaching
- Basic rules for bedside teaching
- Effective instructional strategies:
- Observation and feedback
- Conscious role modeling
- SNAPPS approach
- OMT: One Minute Teacher (preceptor)

### Unit VI

#### 1. DEFINITION/DESCRIPTION:

- Health education:
  - Health information sharing
  - Social and Behavior Change Communication (SBCC)
- Goal of health education/SBCC
- The purpose/aims of health education/SBCC:
  - To make people value good health
  - To teach them what to do in order to have good health
  - To encourage people in the community to develop and use health services
  - To encourage community effort and action in order to have a healthy community
- Results of SBCC/health education Activities are for the population to:
  - Acquire (learn and understand) basic health information
  - Examine attitudes and values about health and illness
  - Acquire new and/or improved healthful skills
  - Obtain needed resources for improving health

## Semester IV

- Basic steps in conducting a health education session:
  - Plan and Prepare:
    - Choose topic - problem to be addressed
    - Note important points for presentation and questions to be asked
    - Prepare discussion started- a song, picture, drama story that shows a problem common to the people
    - Gather all materials/supplies needed
  - Conduct the health education session:
    - Greet and introduce self
    - Present discussion starter
    - Ask opened ended questions about discussion started
    - Asked open ended questions about the problem presented in real life
    - Add new information
    - Summarize important points
    - Check patient(s) understanding
    - Thank patient(s )and closed session
    - Evaluate The health Education Session

## 2. ACTIVITIES AND PLANS FOR HEALTH EDUCATION PROGRAM:

- Selecting health educators
- Planning and training for health education programs
- Learning and working with the community
- Examinations and evaluations as a learning process



# Teaching Practicum

## Teaching Practicum Description:

The primary goal of the teaching practicum is to provide the learner with teaching experience within a classroom setting. The students receive instruction and feedback from faculty supervisors who are responsible for the courses in which the practical take place. Students' practical will vary in the extent to which emphasis is placed on instructional time, course development (e.g., preparation of syllabus, assignments, and bibliography), assignment grading, and other curriculum review and planning issues and tasks.

## Objectives:

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

- Prepare teaching plans
- Teach patients or students using appropriate teaching plans
- Develop educational goals and objectives for each of the three domains
- Assess learning outcome after teaching

## Practical Placement:

- Classroom
- Out Patient Department

## Competencies

Knowledge	Attitudes/Behavior	Skills
Identifies differences in auditory, visual, and tactile learning styles	Accepts the role and responsibility for providing health education to patients and families	Incorporates facts, values, and skills into teaching plan
Understands the principles of teaching and learning		Assists patients and families in accessing and interpreting health information and identifying healthy lifestyle behaviors
Is aware of the three domains of learning: cognitive, affective, and psychomotor	Values the need for teaching in all three domains of learning	Provides relevant and sensitive health education information and advice to patients and families
Understands the concept of health literacy	Values the patient's and family's right to know the reason for chosen interventions	Participates in cooperative learning

**Semester IV**

Knowledge	Attitudes/Behavior	Skills
		Discusses clinical decisions with patients and families
		Evaluates patient and family learning

**Teaching/Learning Strategies:**

- Lectures
- Classroom presentations
- Group discussion and exercises
- Educational games
- Demonstration
- Role play
- Case studies
- Seminar presentation
- Coaching
- Homework assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

**Assessment:**

- Written exams
- Case study
- Practical exams

**Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15%

Attendance	5%
Mid-term Exam	25%
Final Exam	40%

**References:**

*Teaching in Nursing*, Diane Billings and Judith Halstead, 2008.

*Principles and Methods of Health Education in Africa*, Miriam Jatan.

Effective Teaching: A Guide for Educating Healthcare Providers, USAID, Jhpiego and WHO, 2005

Clinical Teaching skills Course : Jhpiego, 2011

Educating Health Care Professional in Low-Resource Countries –A Global Approach. Joyce Murray et al, Springer Publishing Company. 2011

# Course Title: Midwifery III – Obstetrics Complications

**Credits:**

5

**Placement:**

Second year Semester II

**Duration:**

16 weeks (14 theoretical and 2 weeks' exams)

70 hours classroom and simulation center

210 hours clinical

**Pre-requisites:**

Basic Math, Basic English, Fundamentals of midwifery, Anatomy and Physiology I and II, Integrated Basic Sciences, Psychology and Sociology, Basic Nutrition, Ethical and Professional Adjustment, Health Assessment, Midwifery I, Midwifery II, Epidemiology Demographics, Tropical and Communicable Diseases, Pharmacology and Drug Calculations, Medical Care.

**Course Description:**

This course is designed to equip the midwifery students with knowledge and skills to recognize and manage, including timely referral, of obstetrical complications, as well as medical conditions during pregnancy, labor, delivery and the postpartum. The learner will moreover be prepared to apply knowledge and skills utilizing the midwifery decision making process to prevent and mitigate complications appropriately by applying knowledge of obstetrical and neonatal care (EmONC)/ Basic Life Saving Skills (BLSS) in managing obstetrical complications.

**Course Objectives:**

On successful completion of this course, the learner will be able to:

- Understand the delivery of effective care including, early detection and management of complications during the antenatal period, labor and delivery and during the postpartum period and neonatal period
- Recognize and appropriately refer women and neonates experiencing complications during the antenatal, labor and delivery postpartum period and neonatal periods.
- Apply midwifery management process using lifesaving skills in caring for patients with medical conditions during pregnancy, labor and delivery and the postpartum periods
- Detect medical conditions early and manage, including referral of patients for advanced management as needed

- Detect early and manage including timely referral for women with common obstetrical complications
- Apply midwifery management process in detecting and managing, including referral, for newborns with problems and complications

**Specific Objectives:**

At the end of this course the midwifery student will be able to:

- Identify common acute and chronic medical disease conditions specific to patients during pregnancy, labor, delivery and the postpartum: such as diabetes, hypertension, severe anemia, malaria
- Identify and provide care for a mother with pregnancy-induced conditions like gestational diabetes, hypertension, pre-eclampsia and eclampsia
- Share best practices and updates in the management of pre-eclampsia/Eclampsia
- Describe strategies for preventing and treating convulsions in Pre-eclampsia/Eclampsia
- Discuss the safety of MgSO<sub>4</sub> in the management of Pre-Eclampsia and Eclampsia
- Describe signs, symptoms and indications for referral of selected complications and conditions of pregnancy: e.g. asthma, HIV infection, diabetes, cardiac conditions, preterm labor and post-dates pregnancy
- Discuss the effects of above named chronic and acute conditions on pregnancy and the fetus
- Demonstrate skills in the diagnosis of an ectopic pregnancy and multiple fetuses
- Identify, manage and refer as appropriate variations from normal during the course of the pregnancy, such as:
  - Small for dates (light) or large for dates [heavy] fetus, Suspected polyhydramnios, diabetes, fetal anomaly (e.g., oliguria)
  - Abnormal laboratory results
- Describe the management of Infections such as sexually transmitted diseases (STDs), vaginitis, urinary tract, upper respiratory
- Perform Fetal assessment in the post-term pregnancy
- Demonstrate treat and/or collaboratively management of selected variations from normal based upon national standards, protocol and guidelines
- Perform external version of breech presentation
- Describe care of a woman who is bleeding in early or late pregnancy

## Semester IV

- List signs and symptoms of abortion complications
- Demonstrate skills in providing post-abortion care, including performing a manual vacuum aspiration, for a woman with an incomplete abortion
- Demonstrate skills in conducting a birth using a vacuum extractor
- Describe indications for emergency measures: e.g. retained placenta, shoulder dystocia, atonic uterine bleeding, and neonatal asphyxia
- Describe indications for operative delivery: e.g. fetal distress, cephalo-pelvic disproportion
- Describe indicators of complications in labor: bleeding, labor arrest, malpresentation, eclampsia, maternal distress, fetal distress, infection, prolapsed cord
- Demonstrate management of malpresentation, shoulder dystocia, fetal distress initially
- Identify and manage a prolapsed cord
- Perform appropriate hand maneuvers for face and breech deliveries
- Demonstrate application of a vacuum extraction for an assisted delivery
- Demonstrate the skills used for management of postpartum hemorrhage due to uterine atony, retained placenta or placental fragments
- Perform manual removal of placenta
- Identify and repair perineum and cervical lacerations
- Perform internal bimanual compression of the uterus to control bleeding
- Prescribe and/or administer pharmacological methods of pain relief when needed
- Administer oxytocics appropriately for labor induction or augmentation
- Administer uterotonics for treatment of postpartum bleeding. Identify and provide care for a postpartum mother with a fever
- Describe indicators of sub-involution e.g. persistent uterine bleeding, infection
- Name and describe indications of selected breastfeeding problems
- List signs and symptoms of life threatening conditions during the postpartum period; e.g. persistent vaginal bleeding, urinary retention, incontinence of feces, postpartum pre-eclampsia
- Describe indicators of selected complications in the postnatal period: e.g. persistent anemia, hematoma, embolism, mastitis, depression, and thrombophlebitis.

- Outline care and counseling needs during and after abortion.
- Begin emergency measures for respiratory distress (newborn resuscitation), hypothermia, hypoglycemia, cardiac arrest.
- Demonstrate care for a mother and newborn using Kangaroo Mother Care.
- Describe selected newborn complications, e.g. jaundice, hematoma, adverse molding of the fetal skull, cerebral irritation, non-accidental injuries, causes of sudden infant death.
- Record findings, including what was done and what needs follow-up.
- Support parents during grieving process for congenital birth defects, loss of pregnancy, or neonatal death

### **Course Content:**

## **Unit II | Pregnancy**

### **1. OVERVIEW OF PREGNANCY**

### **2. MEDICAL CONDITIONS ASSOCIATED WITH PREGNANCY:**

- Blood disorders:
  - Severe anemia
  - blood incompatibility
- Hypertension
- Diabetes mellitus
- Infections (UTI, STIs, TB, Malaria, HIV/AIDS)
- Malaria in pregnancy (MIP):
  - Dangers
  - Case Management: Test, Treat, Tract
  - The goal of malaria treatment during pregnancy:
    - To completely eliminate the infection because any amount of parasites in the blood can affect the mother or fetus
- Symptoms of Uncomplicated Malaria in pregnant women:
  - Fever
  - Shivering/chills/rigors

## Semester IV

- Headaches
- Muscle/joint pains
- Nausea/vomiting
- False labor pains
- Symptoms of severe malaria in pregnant women:
  - Signs of uncomplicated malaria PLUS one or more of the following:
    - Confusion/drowsiness/coma
    - Fast breathing, breathlessness, dyspnea
    - Vomiting every meal/unable to eat
    - Pale inner eyelids, inside of mouth, tongue, and palms
    - Jaundice
    - Diagnosis and Treatment
    - Test- Rapid Test and Microscopic
    - Determine severity
    - Uncomplicated: Manage according to local protocol
    - Severe:
      - Refer immediately to higher level of care
      - Consider giving pre-referral treatment or first dose of antimalarial if available and provider is familiar with its use
  - Treatment:
    - Selection treatment is based on:
      - The gestational age of the pregnancy
      - Availability of approved drugs
  - Treatment of Uncomplicated Malaria:
    - For second and third trimesters, ACTs should be the first-line treatment if available and in line with local protocol
    - For uncomplicated malaria in the 1st trimester and for severe malaria in any trimester, quinine is the drug of choice
  - First trimester:
    - Quinine 10 mg salt/kg body weight three times daily + clindamycin 10 mg/kg body weight twice daily for 7 days
    - If clindamycin is not available, use quinine only
    - ACT can be used if it is the only effective treatment available



- Second and third trimester:
  - Use the ACT known to be effective in the country/region
  - Artesunate and Amodiaquine
  - Artemether-Lumefantrine
  - Dihydroartemisinin-PiperaquineOR
  - Artesunate + clindamycin (10 mg/kg body weight twice daily) for 7 days, OR
  - Quinine + clindamycin for 7 days
  - Treatment for Complicated/Severe Malaria:
- Stabilized and referral to higher level if not at that level
- Management of Convulsions or Fits:
  - Determining Causes of Convulsions - Malaria or Eclampsia
  - Management according to determination
- Severe Malaria: Pre-Referral Treatment:
  - Full dose of parenteral anti-malarials
- First trimester:
  - Quinine is the drug of choice, but in its absence artemether may be used
- Second and third trimesters:
  - IM or IV artesunate is the first and artemether the second option
  - Rectal administration of artesunate or artemether may be given if injections are not possible
- Referral:
  - Preparation
  - Note
  - Accompany
- Pharmacovigilance/Adverse Drug Reaction Monitoring:
  - SP
  - Artesunate and Amodiaquine
  - Artemether/Lumefantrine
  - Quinine
  - Reporting:

## Semester IV

- When, where, how
- Adherence counseling:
  - Why
  - Steps:
    - Ideally, show a sample packet of the medicine to the client
    - Ask the client what she knows about the medicine and how it works
    - Remind the client that malaria is a serious disease
    - Ask what she knows about the effects of MIP

## Unit III | Obstetrical Complications

### 1. SCREENING, IDENTIFYING AND MANAGING PREGNANCY RELATED COMPLICATIONS:

- Bleeding in early or late pregnancy
- Ectopic pregnancy
- Spontaneous abortion
- Pregnancy induced conditions:
  - Hypertensive disorders of pregnancy
  - Gestational diabetes
  - Severe preeclampsia and eclampsia:
    - Overview
    - Definition/Description of pre-eclampsia/Eclampsia
    - Criteria for severe preeclampsia
    - Public health approach to prevention of morbidity and mortality of Pre-eclampsia/Eclampsia
    - Comprehensive Management of Pre-Eclampsia and Eclampsia:
      - MgSO<sub>4</sub>
      - Antihypertensive
      - Delivery
      - Careful monitoring
  - Severe Hyperemesis gravidarum

- Amniotic fluid disorders:
  - Oliguria
  - Polyhydramnious
  - Oligohydramnious
- Placental conditions:
  - Placenta abruption
  - Placenta previa
- Abnormal placentation multiple pregnancy
- Prolonged post term pregnancy
- Intrauterine growth restrictions-small for dates
- Large for dates [heavy] fetus

## **2. SCREENING, IDENTIFYING AND MANAGING COMMON COMPLICATIONS DURING LABOR AND DELIVERY:**

- Preterm Labor
- Description
- Prevention: ANC, Cessation of smoking, identification and management of infections/illnesses/disorders, i.e. Preeclampsia/eclampsia
- Interventions
- Preventive: progesterone therapy. Cerclage
- Eminent Labor-: Antenatal corticosteroids (ACS)/dexamethesone, Tocolytics, antibiotics
- Cord presentation and Prolapsed cord Intrauterine fetal death
- Maternal and fetal distress
- Prolonged labor and Obstructed labor
- Abnormal uterine contractions
- Cephalo-pelvic disproportion
- Malposition and malpresentation:
  - Transverse lie
  - Breech

## Semester IV

- Shoulder dystocia
- Cervical dystocia
- Rupture Uterus:
  - Precipitated Labor
  - Premature labor
  - Screening, identifying and managing common selected complications during the postpartum periods
- Retained placenta:
  - IV/IM oxytocin (10 IU) with controlled cord traction (CCT)
  - Manual Removal
  - Single dose of antibiotics (ampicillin or first-generation cephalosporin)
  - Not Recommended
- Ergometrine
- Retained products
- Postpartum hemorrhage:
  - Definition:
    - Causes
    - Atony uterus
    - lacerations and tears
- PPH Prevention:
  - Facility-based births:
    - Active Management of Third Stage of Labor (AMTSL)—especially oxytocin 10IU IM immediately after birth
  - Community-based births:
    - Promotion of facility-based birth
    - Education about PPH
    - Advance distribution of misoprostol to women for self-administration after birth
  - WHO Key Messages

- PPH Management:
  - Recommended management for atony PPH:
    - Medicine:
      - Intravenous oxytocin-drug of choice
      - Intravenous ergometrine, oxytocin-ergometrine fixed dose, or a prostaglandin drug (including sublingual misoprostol, 800 µg) if no response to IV oxytocin
    - Other management:
      - Uterine massage
      - Intrauterine balloon tamponade if women do not respond to treatment using uterotonics, or if uterotonics are unavailable
    - Temporary measures:
      - Bimanual uterine compression
      - External aortic compression
      - The non-pneumatic anti-shock garments
    - Surgical interventions
    - Not Recommended:
      - Uterine packing

## **Unit IV | Special Obstetrics Procedures for Management of Abnormal Labor/Emergency Obstetric Care**

### **1. OVERVIEW OF SAFE MOTHERHOOD AND EMONC:**

- Basic and Comprehensive
- Signal functions:
  - Midwifery Scope of Practice in EmONC

### **2. SELECTED OBSTETRICAL PROCEDURES:**

- Infection management
- Management of bleeding in early and late pregnancy
- Manual vacuum aspiration
- Management of shock:
  - Blood transfusion

## **Semester IV**

- Anti-shock garments
- Management of premature labor:
  - Antenatal corticosteroids
- Assisted delivery:
  - Vacuum extraction
  - Breech delivery
  - Forceps
- Augmentation of labor
- Caesarean section:
  - Perioperative care
  - Wound healing process
- Maternal resuscitation
- Management of Postpartum haemorrhage:
  - Bimanual compression
  - Manual removal of placenta
- Pharmacology for emergency obstetric care

## **Unit V | Management of Other Maternal and Newborns Problems**

- Fever- non malaria fever
- Fistula
- Adolescent pregnancy
- Breast feeding problems - mastitis
- Sexually Transmitted Infections
- HIV and AIDS
- Malaria
- Maternal and newborn Danger signs
- Health education

## **Unit VI | Abortion**

- Description
- Complications of abortion
- Manual vacuum aspirator (MVA)
- Post Abortion Care (PAC)
- FP Counseling and service

## **Unit VII | Common Newborn Complications**

- Abnormal birth weight- small or large for dates
- Prematurity - Born too soon
- Post-maturity
- Asphyxia neonatorium
- Neonatal jaundice
- Metabolic disorders of the newborn
- Birth injuries
- Congenital abnormalities
- Neonatal sepsis
- HIV infection in the neonate

## **Unit VIII | The Pre-Term**

### **1. CHARACTERISTICS OF PRE-TERM INFANTS:**

- Low birth weight
- Respiratory difficulties
- Body temperature regulation
- Digestive problems
- Renal function
- Circulatory disorders

## Semester IV

- Infections
- Clinical features

### **2. CARE AND MANAGEMENT OF PREMATURE INFANTS:**

- Immediate care:
  - Warm cot or incubator
  - Kangaroo mother care (KMC)
  - Resuscitation equipment
  - Allow infant to recover from stress of delivery
- Later care:
  - Maintenance of respiration and good color
  - Provision of warmth and breast feeding
  - Prevention of infection
  - Education of mother on care of baby

## **Unit IX | Diagnosis and Management of the Following Problems**

### **1. NEWBORN WITH DISORDERS:**

- Respiratory problems
- Congenital disorders
- Hydrocephalus
- Spina bifida
- Anencephaly
- Meningocele

### **2. GASTRO INTESTINAL TRACT ABNORMALITIES:**

- Cleft lip and cleft palate
- Obstruction of GI tract
- Pyloric stenosis
- Hiatus hernia



- Imperforate anus
- 3. BIRTH INJURIES:**
- Cephalohematoma
- Caput succedaneum
- Muscular injuries
- Skeletal fractures
- 4. INTRA-CRANIAL INJURIES**
- 5. HAEMOLYTIC DISEASE OF THE NEWBORN**
- 6. CARDIAC DISORDERS:**
- Congenital heart disease
- Congestive heart failure
- 7. NEONATAL INFECTIONS:**
- Neonatal sepsis
- Thrush
- Ophthalmia neonatorum
- Septic spots
- Neonatal jaundice
- Omphalitis
- Pemphigus neonatorum
- Infective gastroenteritis
- Neonatal tetanus

## **Unit XI | Psychological Support for Families with Complications**

- Psychological support to mother/parents for a congenital birth defect or with a loss of pregnancy/intrauterine fetal death/baby
- Emotional support of mothers and family members – newborn with disorders:
  - Working through a crisis

## **Semester IV**

- Avoiding negative communication
- Grieving
- Education of the mother/parents
- Acceptance of infant by parents

## **Unit XIII | Referral system**

## **Unit XIV | Documentation of care**

# Midwifery III Clinical Course

## Clinical Course Description:

This clinical course is designed to equip the learner with skills and attitudes for managing clients with complications during pregnancy, labor and delivery. Emphasis will be on the management of patients with complications, including adolescent patients.

## Course Objectives:

At the end of this course, the learner will be able to:

- Detect pregnancy related complications early, take appropriate actions and/or refer for further management.
- Demonstrate competencies in working collaboratively with other health professionals in managing maternal obstetrical and medical complications
- Demonstrate skills in prescribing and administering pharmacological agents for obstetrical and medical complications

## Clinical Skills:

- Taking patient medical History
- Performing physical examination
- Monitoring labor using the partograph
- Managing labor at each stage to prevent complications
- Managing complications of labor

## Clinical Placement:

- Antenatal Clinic
- Hospital/Health Centers (Labor, delivery and postpartum wards)
- Communities
- Family planning clinics

## Resources:

- Gloves(Examination and GYN)
- Plastic Apron
- Infant weighing scale
- Medication

## Semester IV

- Fetoscope
- Stethoscope
- BP Machine
- Delivery and episiotomy sets
- Tape line
- Pregnancy wheel
- National protocols and guidelines for treatment
- Infant/adult resuscitation kits
- Manual Vacuum Aspirator kits
- Rain Boots
- Protective goggles
- Head cover
- Tests Kits
- Masks

## Competencies

Knowledge	Attitudes/Behavior	Skills
<p><b>The midwife has the knowledge and/or understanding of:</b></p> <ul style="list-style-type: none"> <li>– The community and social determinants of health (e.g., income, literacy and education, water</li> <li>– Supply and sanitation, housing, environmental hazards, food security, disease patterns, common threats to health)</li> <li>– Principles of community-based primary care using health promotion and disease prevention and control strategies</li> <li>– Direct and indirect causes of maternal and neonatal mortality and morbidity in the local</li> <li>– Community and strategies for reducing them</li> </ul>	<p><b>The Midwife:</b></p> <ul style="list-style-type: none"> <li>– Is responsible and accountable for clinical decisions and actions</li> <li>– Acts consistently in accordance with professional ethics, values and human rights</li> <li>– Acts consistently in accordance with standards of practice</li> <li>– Maintains/updates knowledge and skills, in order to remain current in practice</li> <li>– Uses universal/standard precautions, infection prevention and control strategies, and clean technique</li> </ul>	<p><b>The midwife has the skill and/or ability to:</b></p> <ul style="list-style-type: none"> <li>– Engage in health education discussions with and for women and their families</li> <li>– Use appropriate communication and listening skills across all domains of competency</li> <li>– Assemble, use and maintain equipment and supplies appropriate to setting of practice</li> <li>– Record and interpret relevant findings for services provided across all domains of competency, including what was done and what needs follow-up</li> <li>– Comply with all local reporting regulations for birth and death registration</li> </ul>

Knowledge	Attitudes/Behavior	Skills
	<ul style="list-style-type: none"> <li>– Behaves in a courteous, non-judgmental, non-discriminatory, and culturally appropriate manner with all clients</li> </ul>	<ul style="list-style-type: none"> <li>– Take a leadership role in the practice arena based on professional beliefs and values</li> </ul>

**Assessment:**

- Written Exams
- Case study
- Procedure evaluation
- Practical exam
- Clinical performance
- OSCE

**Teaching/Learning Strategies:**

- Classroom presentations
- Case studies
- Role plays
- Group exercises
- Demonstration and return demonstration
- Coaching
- Homework and laboratory assignments
- Care plan

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Complete all clinical hours
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class, laboratory and clinical practicum
- Complete all assignments and examinations on due dates

## Semester IV

### Required Resources:

*Myles Textbook for Midwives*, 15th Ed., D. Fraser, M. Cooper, 2009.

*Midwifery: Preparation and Practice*, S. Pairman, J. Pincombe, C. Thorogood, S. Trace, 2006.

*Varney's Midwifery*, 4th Ed., H. Varney, 2004

*Anatomy and Physiology for Midwives*, J. Coad, 2005.

Davidson, M., London, M., Ladewig, P. (2008) *Olds' Maternal-Newborn Nursing & Women's Health Across the Lifespan* (8th ed.) Upper Saddle River, N. J.: Pearson Education, Inc. ISBN: 978-0-13-220873-4

BLSS Modules, fourth edition

*The Newborn Child*, P. Johnston, K. Flood, K. Spinks, 2002.

Interdisciplinary Procedure Manual 2013

MOHSW National obstetrical guidelines and protocols

### Assessment:

- Formative assessment: Case study, procedure evaluation
- Summative assessment: Practical exam, clinical performance, OSCE.

### Assessment Criteria— Standard Grading System:

Quizzes	15%
Assignments	15% (written and oral)
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Surgical Care

**Credits:**

3

**Placement:**

Second year, semester four

**Duration:**

16 Weeks (14 instructional and 2 for exam)

42 hours classroom and simulation Center

126 clinical hours

**Course Description:**

The course aims at equipping students with knowledge and skills to manage adult patients with surgical conditions of the selected systems and organs, including those patients with neoplasms, wound inflammation, cardio-thoracic conditions, and conditions of the skeletal system, and to provide preoperative and perioperative care within their scope of practice. Emphasis is placed on utilization of knowledge of the human needs theory in the provision of comprehensive quality management professionally and ethically. The course will focus on priority health conditions of the Africa region within the context of primary health care approach at different level as prescribe by the MOHSW.

**Course Objectives:**

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

- Describe the structure and functions of the selected systems/organs; causes, pathophysiology and clinical features of the conditions of selected systems
- Demonstrate ability in assessing an adult or aged patient with surgical disruptions
- Demonstrate competence in analysing assessment data and identifying problems of the adult and aged patient with surgical diseases and conditions.
- Demonstrate capability in assisting with the diagnostic assessments of adult or aged patients and surgical diseases and conditions.
- Demonstrate knowledge and skills in the management of adult or aged patients with selected surgical diseases and conditions based on the essential health package.
- Demonstrate ability to prescribe and utilized selected pharmacologic agents used in the treatment of adult or aged patient with surgical diseases and conditions based on the essential health package.
- Demonstrate ability in identifying nutritional requirements of adult or aged patients with surgical diseases and conditions.

## Semester IV

- Apply psychosocial, cultural, spiritual concepts and values in the management of the patients with surgical diseases and conditions and their families.

### **Course Objectives:**

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

- Define the perioperative period
- Describe care needed in the preoperative and postoperative period
- Identify basic surgical instruments and common procedures in surgery
- Correctly demonstrate performance of sterile techniques
- Practice Universal Precautions during patient care
- Describe inflammation, wounds and the healing process after surgery
- Describe the midwife's role in the management of surgical patients with selected tumors
- Describe the management of patients during the peri-operative period
- Describe and manage selected cardio-thoracic conditions
- Identify and manage surgical shock
- Describe and management selected surgical conditions of the respiratory tract
- Describe and management selected surgical conditions of the cardio-vascular system and the thorax
- Describe and management selected surgical conditions of the digestive system
- Identify the conditions that require surgical intervention
- Explain the preparation for patients undergoing various types of surgeries
- Utilize health care process/models in the perioperative management of patients

### **Course Content:**

#### **1. SURGICAL/PERIOPERATIVE PERIOD:**

- Definition
- Principles of sterile techniques/surgical asepsis
- Preoperative phase:
  - Physical assessment



- Teaching
- Physical preparation
- Fluid and electrolyte balance
- Bladder incontinence
- Rest and comfort
- Day of surgery:
  - Medical records
  - Vital signs
  - Hygiene
  - Hair and cosmetics
  - Removal of prostheses
  - Bowel and bladder
  - Transport to the operating room
- Intraoperative Care:
  - Members of the surgical team
- Anesthesia in surgery:
  - Types of anesthesia:
    - General
    - Muscle relaxants
    - Local
- OR techniques – scrubbing, gowning and gloving
- Surgical instruments
- Setting of trolleys, e.g. Mayor's table
- Care during surgery:
  - Providing emotional care
  - Assisting with Receiving, positioning, skin preparation, draping of patient
  - Maintaining patient positioning
  - Maintaining surgical asepsis

## Semester IV

- Preventing patient heat loss
- Monitoring for malignant hyperthermia
- Assisting with surgical wound closure
- Transporting patient to post anesthesia or intensive care unit
- Prevention, early detection and management of common complications:
- Possible Complications:
  - Shock
  - Cardiac arrest
  - Embolism/thrombosis
- Post-operative care in the intensive care unit:
  - Admission
  - Immediate baseline assessment
  - Assessment and intervention for immediate post-operative complications
  - Discharge from ICU
  - Transfer to clinical unit
- Post-operative care on clinical unit:
  - Assessment
  - Establishment of goals
  - Restoring homeostasis and preventing complications
  - Maintaining and promoting adequate airway and respiratory function
  - Plus all other care

## **2. ASEPTIC TECHNIQUE AND COMMON SURGICAL/PROCEDURES:**

- Antrum washout
- Underwater seal drainage
- Echocardiogram
- Thoracentesis
- Catheterization
- Gastric washout

- Bladder irrigation
- Ear syringing
- Eye irrigation
- Suturing simple lacerations
- Incisions and drainage
- Male circumcision
- Ear piercing
- Removal of foreign bodies
- Removal of suture/clips

### **3. SURGICAL WOUNDS:**

- Etiology of tissue injury
- Types of wounds – bruise, abrasion
- Kinds of wounds – incised, stab, punctured, laceration, penetrating, perforated, avulsion
- Healing process – resolution, first intention, second intention
- Wound closure – primary closure and delayed primary closure
- Sutures and drains
- Dressings

### **4. SURGICAL INFECTIONS:**

- Spread of infection
- Diagnosis
- Prevention
- Etiology
- Systemic manifestations/clinical features
- Common surgical bacterial infections:
  - Organisms causing surgical infection

## Semester IV

- Cellulitis, pustules, furuncles, impetigo, carbuncles, gas gangrene, Fournier's gangrene, Synergistic gangrene of Meleney

### **5. CRITICAL CARE FOR THE SURGICAL PATIENT:**

- Principles and concepts of critical care
- Assessment of patients and diagnostic investigations
- Care of specific patients and monitoring
- Cardiopulmonary resuscitation (CPR)
- Use of ventilators/heart lung machines, etc.
- Care of patients with pacemakers, etc.

### **6. CARE OF SURGICAL LESIONS AND WOUNDS OF SELECTED SYSTEMS:**

- Review of the structure and functions of the selected systems/organs
- Causes, pathophysiology and clinical features of the conditions
- Management of clients with surgical conditions of the musculo skeletal system:
  - Sprains, dislocations, fractures
  - Osteomyelitis
  - Contractures
  - Decubitus ulcer
  - Skeletal Tuberculosis
  - Tumors of the bones, osteogenesis imperfect, kyphosis, lordosis, scoliosis, spondylosis, osteomyelitis, osteitis
- Bone healing:
  - Common assessments and procedures:
    - Diagnostic tests
    - Plaster of Paris (POP), traction, splints, etc.
    - Amputation
- Management Of Clients With Surgical Conditions Of The endocrine System
  - Goiter hypo/hyperthyroidism and thyroidectomy
  - Tumor of the endocrine glands, etc.

**7. MANAGEMENT OF CLIENTS WITH SURGICAL CONDITIONS OF THE NEUROLOGICAL SYSTEM:**

- Increased intracranial pressure
- Head injuries
- Brain tumours
- Spinal injuries, tumors
- Craniotomy, etc.

**8. MANAGEMENT OF CLIENTS WITH SURGICAL CONDITIONS OF SPECIAL SENSORY ORGANS:**

- Eye: Corneal perforation, conjunctivitis, cataract, furuncles, stye, refraction errors
- Cancer of the eye
- Nose – deviated septum, etc.
- Ear, nose and throat – foreign bodies:
  - Mastoiditis
  - Sinusitis, excessive earwax, mouth, nasal polyps
  - Adenitis, tonsillitis/tonsillectomy, etc. Eye – cataract, glaucoma, retinal detachment, etc. Perforating injuries – sympathetic ophthalmia
  - Biopsy – warts, moles, etc.

**9. MANAGEMENT OF A CLIENT WITH SURGICAL CONDITIONS OF THE INTEGUMENTARY SYSTEM:**

- Burns:
  - Reconstructive (plastic) surgery
  - Grafts, skin and others
  - Tissue transplants

**10. MANAGEMENT OF A CLIENT WITH SURGICAL CONDITIONS OF THE REPRODUCTIVE SYSTEM:**

- Hernias
- Abortion
- Uterine fibroids and hysterectomy

## Semester IV

- Uterine prolapse
- Cervical and breast cancer
- Hydrocoele
- Enlarged prostate and Prostatectomy
- Mastitis and Breast surgeries – mastectomy, etc.

### **11. MANAGEMENT OF CLIENTS WITH SURGICAL CONDITIONS OF THE CARDIOVASCULAR SYSTEM:**

- Cardiothoracic conditions: Function problems:
  - Constrictive pericarditis/cardiac tamponade
  - Valvular heart disease:
    - Stenosis
    - Mitral
    - Aortic
  - Chronic arterial disease – atherosclerosis
  - Varicose veins, deep vein thrombosis
  - Trauma, road traffic accident (RTA), penetrating wounds, chest injuries, e.g. fractured rib

### **12. MANAGEMENT OF CLIENTS WITH SURGICAL CONDITIONS OF THE RESPIRATORY SYSTEM:**

- Chronic obstructive pulmonary disease
- Pleural effusion
- Chest surgery
- Tracheostomy
- Lung cancer Larynx/trachea – laryngectomy, tracheostomy, etc.
- Lungs – atelectasis, lung abscess, pneumothorax, hemothorax, pleural effusion, etc.
- Chest injuries – fracture of ribs, etc.
- Chest drainage (Closed)

**13. MANAGEMENT OF THE CLIENT WITH SURGICAL CONDITIONS OF THE THORAX/CARDIOVASCULAR SYSTEM:**

- Congenital abnormalities of the heart (atrial septal defect)
- Constrictive pericarditis/cardiac tamponade
- Valvular stenosis (mitral, aortic)
- Chronic arterial diseases
- Embolectomy, thrombolectomy, varicose veins, etc.
- Insertion of pace makers/defibrillators
- Thoracotomy, etc.
- Surgical treatment of traumatic heart lesion, etc.

**14. MANAGEMENT OF THE CLIENT WITH SURGICAL CONDITIONS OF THE DIGESTIVE SYSTEM/GASTROINTESTINAL:**

- Cancrum oris, cleft lip, cleft palate
- Esophagopharyngeal atresia, achlasia, esophagophageal structures, pharyngeal pouch
- Pyloric stenosis, perforated peptic ulcer
- Intestinal obstruction, hernia, intussuception, appendicitis, vulvulus, acute abdomen
- Diverticulitis, large bowel obstruction, hemorrhoids and fissures, fistula
- Hirschprung's disease (megacolon), etc.
- Tonsillitis and tonsillectomy
- Peritonitis
- Gastritis
- Splenic rupture
- Acute abdomen
- Duodenal and gastric ulcers
- Appendicitis and appendectomy
- Intestinal obstruction
- Typhoid perforation of distal ileum

#### Semester IV

- Strangulated hernia
- Gall Bladder and liver disorders
- Perforated peptic ulcer

#### **15. MANAGEMENT CLIENTS WITH SURGICAL CONDITIONS OF THE GENITOURINARY SYSTEM:**

- Cystoscopy
- Renal calculi
- Renal tumors
- Vesicovaginal fistulae
- Diseases of the prostate (cancer, prostatic enlargement)
- Cystectomy orchidopexy
- Crushed bladder, renal calculi, urethral stricture, etc.

#### **16. MANAGEMENT OF CLIENTS WITH SURGICAL CONDITIONS RELATED TO FLUID AND ELECTROLYTE IMBALANCES:**

- Acid –base disturbances (metabolic and respiratory acidosis and alkalosis)
- Electrolyte imbalances
- Fluid imbalances and infusions
- Dehydration and hypovolemic shock

#### **17. MANAGEMENT OF SURGICAL CLIENTS TAKING THE FOLLOWING PHARMACOLOGIC AGENTS:**

- Anti-inflammatory agents
- Analgesics
- Antifungal agents
- Antiparkinson agents
- Diuretics
- Electrolyte supplements



# Surgical Health Care Clinical Course

## Clinical Description:

The Clinical provides the learner the opportunity to develop skills and competences necessary for managing adult patients with surgical conditions/disorders of systems of the body. The learner utilises the human needs theory, primary health care approach and the care process in the provision of care to adult patients with surgical conditions and their families.

## Clinical Objectives:

At the end of this clinical experience, the student will be able to:

- Demonstrate competence in assessment of an adult patient with surgical conditions applying the human needs theory.
- Demonstrate competence in preparation of diagnostic assessments done on adult patients with chronic diseases.
- Demonstrate competence in managing patients receiving pharmacologic agents used in the surgical treatment of adult patients with acute and chronic diseases.
- Demonstrate competence in identifying nutritional requirements of adult patients with surgical diseases and conditions.
- Apply psychosocial, cultural and spiritual, ethical professional values in provision of care and management of the adult patient and support for their families.

## Clinical Skills:

- Preventing pressure ulcers
- Positioning patients
- Aspiration of Bone marrow
- Providing wound/pressure sores care
- Suturing wounds
- Irrigating wounds
- Removing sutures and clips
- Performing Incision and drainage
- Administering injections
- Removing drains from wound
- Caring for Stump after amputation

## Semester IV

- Bandaging, splinting and applying sling
- Applying Plaster of Paris (POP)
- Removing plaster cast
- Applying and teaching range of motion exercises for patients in traction
- Ambulating a patient
- Assisting in Lumbar puncture procedure
- Performing mental State examination
- Preventing injury in patients with epilepsy Collecting specimen for lab investigation
- Measuring intake and output
- Preparing and administering Sitz bath
- Assisting in Gynaecological Examinations
- Administering/assisting patient with baths and personal hygiene
- Applying topical ointments

### Clinical Placement:

- Operating Room Theatre
- Surgical wards

### Competencies

Knowledge	Attitudes/Behaviours	Skills
Identifies components of the midwifery process appropriate to individual health care needs	Appreciates the difference between data collection and assessment	Performs physical assessment to identify baseline normal/ abnormal findings
Demonstrates understanding of the diversity of the human condition	Values the inherent worth and uniqueness of individuals and populations	Plans appropriate care for clients and establishes priorities
Understands the concept of accountability for own midwifery practice	Shows commitment to provision of high quality, safe and effective patient care	Safely performs learned skills to adult clients with medical and surgical conditions
Understands the culture of midwifery.	Recognises the responsibility to function within acceptable behavioural norms appropriate to the discipline of midwifery	Completes management for clients in a timely manner

Knowledge	Attitudes/Behaviours	Skills
Understands the concept of accountability for own midwifery practice	Recognises the responsibility to function within acceptable behavioural norms appropriate to the discipline of midwifery and the health care institution	Adheres to school/agency policies and principles regarding ethical behaviour and patient confidentiality
Understands apply the principles of effective communication through various means	Accepts responsibility for communicating effectively	Demonstrates effective communication skills in order to obtain data for client assessment and share pertinent information
Understands apply the principles of teaching and learning	Accepts the role and responsibility for providing health education to patients and families	Identifies client learning needs and formulates a plan for teaching
Demonstrates knowledge of basic scientific methods and processes regarding the administration of medicines	Appreciates the strength of scientific bases for practice	Correctly and accurately administers medications
Integrates objective data with knowledge gained from an assessment of the subjective experiences of the patient and his/her family	Values the midwifery process as a means of identifying and meeting individualised needs of the client and his/her family	Documents appropriate information regarding the health status of medical-surgical patients according to school/agency policies

**Assessment:**

- Written examinations
- OSCE
- Logbook
- Checklists

**Teaching Methods:**

- Lecture/discussion
- Group discussions
- Enquiry based learning
- Directed and self-directed learning
- Role play
- 6 Simulations
- Case studies

## Semester IV

- Demonstration/return
- Demonstration of physical assessment in the clinical lab and the clinical areas

### References:

ICN, 2010

### Textbooks:

Kozier B, Erb, G Berman, A. & Burke K. (2008). Fundamentals of nursing: concepts, process & procedures

Gray, JAM. (2001). Evidence-based health care. Edinburgh. Churchill Livingstone

Robinson, J. (2005) Essentials of health and wellness. New York: Thomson ; Delmar Learning.

Literature cited:

The Community college of Baltimore (2007) NUR 210: Nursing management of the adult client I.

Hardy, B. (2005) N102: Medical-surgical nursing

Medical Surgical Nursing, Brinner and Suddarth.

*Complete Book Collection, Handbook of Medical Surgical Nurse, 2006.*

### Assessment

- Continuous assessment
- Midterm examination
- Summative Assessment
- End of course examination

### Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Psychiatric Mental Health

**Credits:**

3

**Placement:**

Second semester of second year

**Duration:**

16 Weeks (14 instructional and 2 exams)

42hours classroom

42 hours clinical

**Pre-requisites:**

Health Assessment, PHCI &II, Pharmacology, Fundamentals of Midwifery I & II, Midwifery I & II, Tropical/Communicable Diseases, Basic Sciences

**Course Description:**

This course introduces the student to basic concepts in mental health, the development and characteristics of normal mental health and a variety of common psychiatric conditions and the characteristics and treatment of mental illnesses. This course is taught along with relevant management modalities, requisite interpersonal skills and attitudes necessary for the learner to act as a therapeutic agent. The course will enable the learner to develop competence in using the Diagnostic Statistical Manual for Mental Disorders Version Five revised text (DSM IV-TR) multi-axial diagnosis approach; and in evaluating factors in the individual, family or community that hinder or promote achievement of optimal mental health. This course is also designed to equip health professionals with basic information about SGBV and prepare them to identify and manage the psychosocial and emotional consequences stemming from SGBV.

**Broad Objectives:**

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

- Discuss and examine the psychological, social and emotional development of an individual
- Implement activities for promoting the mental health of individuals, family and community across the lifespan based on the basic psychiatric theories and concepts in relation to human society
- Utilize various screening tools, assess psychiatric patients and manage mental health disorders in an integrated PHC Approach, including referrals to Mental Health Clinicians (MHC) or physicians
- Counsel the patient with psychiatric disorders and apply other preventive measures

## Semester IV

- Appropriately manage individuals, families and communities with mental health/psychiatric needs.
- Manage psychosocial and emotional consequences faced by SGBV Patients

### **Specific Objectives:**

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

- Define mental health and mental illness
- Discuss the History of Mental Health in Liberia
- Identify the role of the midwife in the promotion of mental health
- Describe the normal stages of mental growth
- Describe the three stages of personality development and the levels of thought
- List two biological factors in personality development
- List three culture factors in personality development
- Describe the influence of the family and community on the mental health of the individual
- Conduct a mental health interview according to guidelines
- Define verbal and non-verbal communication
- List five elements which promote communication
- List three barriers to effective communication
- Describe the methods of therapeutic communication
- Define stress
- List four physical symptoms of stress
- List four ways a person can effectively deal with stress
- List four ineffective ways for dealing with stress
- Define defense mechanisms
- Describe seven most common defense mechanisms
- Describe the various types of mental disorders
- Recognize the symptoms of acute mental illnesses.
- Utilized the DMV-IV TR to identify and diagnose psychiatric disorders

- Discuss and analyze a mental health case report
- Explain what depression is and recognize the symptoms of depression
- List the symptoms/criteria for diagnosing depression
- List appropriate therapy for treating depression
- Explain what anxiety disorders are and recognize the symptoms of anxiety disorders, including, open mole and provide appropriate care for the patient
- Explain what psychosomatic conditions are and recognize psychosomatic conditions when They occur and provide appropriate care for the patient
- Explain what epilepsy is and recognize signs and symptoms of epilepsy and provide appropriate care for the patient.
- Explain the meanings of psychosis and mania and describe the signs and symptoms of each condition and provide appropriate care for the patient
- Demonstrate skills in screening and Identifying a mother with postpartum psychosis
- Describe care for care for a postpartum mother with postpartum Psychosis
- Describe appropriate care and counseling for the dying
- Describe the situation of sexual gender-based violence noting legal and ethical, psychosocial and sexual issues of SGBV.
- Describe how to provide psychosocial and emotional care for survivors of SGBV/rape

### **Course Content:**

## **Unit I | Introduction and Overview of the Course**

- Definition of mental health and mental illness
- Trends and issues in mental health
- Legal and professional aspects of mental health in the country
- Characteristics of mental health and mental ill-health
- Psychosocial disorders
- Speech disorders

## Unit II | Normal Stages of Mental Growth during the Human Life Cycle

- Intrauterine growth
- Birth to 3 years
- The 4–6-year-old child
- 7–12 years – age of socialization
- Adolescence
- Young adult – parenthood
- Middle age
- Old age

### 1. STAGES OF PERSONALITY DEVELOPMENT:

- Id
- Ego
- Superego

### 2. LEVELS OF THOUGHT:

- Conscious
- Subconscious
- Unconscious

### 3. BIOLOGICAL AND CULTURE FACTORS IN PERSONALITY DEVELOPMENT

### 4. INFLUENCE OF THE FAMILY AND COMMUNITY ON MENTAL HEALTH OF THE INDIVIDUAL

### 5. PERSONALITY DEVELOPMENT AND SOCIALIZATION:

- Individual and group interaction
- Stress mechanisms and responses
- Adaptation/coping mechanisms
- Theories and psychiatric mental health practices
- Sexuality and sexual concerns



## **Unit III | Stress and Mental Health**

- 1. DEFINITION OF STRESS**
- 2. CAUSES OF STRESS**
- 3. SYMPTOMS OF STRESS**
- 4. EFFECTIVE WAYS FOR DEALING WITH STRESS**
- 5. INEFFECTIVE WAYS FOR DEALING WITH STRESS**
- 6. STRESS MANAGEMENT**
- 7. EIGHT MOST COMMON DEFENSE MECHANISMS:**
  - Denial
  - Repression
  - Displacement
  - Projection
  - Regression
  - Conversion reaction
  - Compensation
  - Rationalization

## **Unit IV | General Mental Health Interventions**

- 1. MENTAL HEALTH ASSESSMENT:**
  - Communication for the assessment
  - Definition of communication:
    - Verbal
    - Nonverbal
  - Process
  - Components of the communication process:
    - Elements of communication
    - Barriers to effective communication

## Semester IV

- Methods of therapeutic communication:
  - Rapport
  - Empathy
  - Sympathy
  - Body language
  - Silence
  - Listening
  - Presence
  - Touch
  - Talking
- Assessment in psychiatric mental health
- The use of a standardized assessment tool to help
- Includes the patient's history and identify the mental status of the patient
- Types:
  - Mini Mental-A brief initial screening with all of the patients:
    - Ask a few simple questions about their mental health:
      - How have you been feeling recently? I am asking not only about your physical health, but also about your emotions and feelings.
      - Have you been feeling under stress recently? If so, why? How is this affecting your health?
  - Full Mental- in-depth mental health assessment for those who seem to have symptoms:
    - Steps:
      - Ask basic introductory questions and look for warning signs
      - Ask questions based on the particular warning signs you perceive
      - Make a preliminary diagnosis
      - Provide counseling based on your diagnosis
- Types of questions:
  - Do you have any problems sleeping at night?
  - Have you been feeling as if you have lost interest in your usual activities?

- Have you been feeling sad or unhappy recently?
- Have you been feeling scared or frightened about anything?
- Have you been drinking a lot of alcohol recently?
- Have you lost your appetite recently? If so, why?
- Has anyone in your family had a similar problem?
- Physical warning signs of potential mental health problems?
- Multiple symptoms such as aches and pains in different regions of the body, tiredness, dizziness, sleep problems, palpitations, tingling numbness in the fingers
- A history of complaints of more than three months
- A history of problems at home, such as violence
- Physical symptoms of fear, including fast heartbeat, palpitations, sweating, nightmares
- Anxiety can also cause sensations similar to physical events, such as a heart attack
- What are behavioral signs of potential mental health problems?
- Being extremely withdrawn or not wanting to talk
- Being extremely jumpy, agitated, or frightened
- Complaining of lack of sleep
- Unexplained tiredness
- Incoherent, confused speech
- Strange behavior
- Abnormal dress
- Little facial expression
- Aggressive or violent behavior
- Physical restlessness – people who cannot sit still
- Check the following:
  - Appearance: looks, dressing, hygiene and grooming
  - Speech: intelligible, clear, mumble, fast
  - Mood: Hostile, grandiose, helpless
  - Reality Orientation:

## Semester IV

- Time and date
- Place and location
- Memory: recent and past
- Therapeutic Interventions:
  - Counselling
  - Group therapy
  - Management of aggression/violence
  - Psychopharmacotherapy
  - Milieu therapy
  - Occupational therapy

## 2. MENTAL HEALTH COUNSELING - IPCC:

- Kinds of counseling:
  - Supportive Counseling:
    - This is aimed at helping the client feel less burdened by what is going on around him or her
  - Client-Centered or Person-Centered Counseling:
    - This aims at listening to the client and working with their goals.
  - Group Therapy or Group Counseling:
    - This is often successful when a group of clients with similar problems feel they would benefit from sharing with others.
- Essential factors:
  - Face to face
  - Confidentiality
  - Non-judgmental, accepting, and caring atmosphere regular schedule
  - State ground rules and expectations
  - KISS – Keep It Short and Simple:
    - Speak slowly but clearly, using simple words
    - Avoid joking and laughing, remember the patient does not feel joy
    - Show empathy and concern
    - Respect them if they do not want to talk about it

- Allow them to cry
  - Be careful about physical, even pat on shoulder, etc.
  - Trauma counseling can be a very long process
  - When possible, it is often best to have female health workers counsel women and male health workers counsel men
- Steps in the process:
    - Welcome the client, and exchange greetings and introductions
    - Ask the client about the reason for the visit
    - Provide ground rules and confidentiality
    - Assist the clients to discuss their problems, build on their own strengths, and find their own solutions
    - Allow the client the opportunity to discuss experiences that are difficult and painful
    - Listen attentively to the client's story
    - Reflect and encourage the client to resolve issues
    - Provide closure and discuss the next appointment

### **3. OVERVIEW OF TREATMENT PSYCHIATRIC DISORDERS:**

- Tranquilizers (short-term for anxiety)
- Antidepressants
- Lithium
- Chlorpromazine and other antipsychotics
- Electroconvulsive therapy
- Psychotherapy

### **4. PREVENTION AND MENTAL HEALTH REHABILITATION PROGRAMS**

### **5. MENTAL ILLNESS CASE REPORT:**

- Components
- Process

## Unit V | Disorders

### 1. PSYCHIATRIC DISORDERS:

- Causes of psychiatric disorders:
  - Biological
  - Psychological
  - Social
- Interrelationship between biological, psychological and social causes
- Classification and diagnosis of psychiatric disorders:
  - The DSM V-TR Multi-axial diagnosis:
    - Anxiety disorders
    - Mood disorders
    - Psychotic disorders
    - Substance use disorders
    - Personality disorders
    - Psychiatric disorders common in children and adolescents
    - Dementias
- Neuroses differentiated from psychoses:
  - Depression:
    - Definition
    - Causes:
      - Stressful or traumatic life events
      - Poverty or loss of employment
- Signs and Symptoms:
  - Low mood or loss of interest
  - Low energy/general inactivity
  - Changes in appetite, weight, or sleep pattern
  - Feelings of guilt or worthlessness
  - Little or no facial expression
  - Bad self-care
  - Suicidal ideas

- Illnesses, headaches
- Loss of concentration or difficulties making a decision
- Recurring thoughts about death, either the wish to die or fear of dying
- Crying frequently
- Withdrawing from others (social isolation)
- Neglecting personal appearance
- Stooped posture or dejected facial expressions

## **2. DIAGNOSING MODERATE OR SEVERE DEPRESSION:**

- The patient must have all of the following:
  - At least 2 of the following 3 symptoms:
    - Depressed mood (and/or irritability in a child) most of the day, almost every day
    - Loss of interest or pleasure in activities normally pleasurable
    - Decreased energy/becoming fatigued easily/always feeling fatigued
    - At least 3 of the following symptoms in the past 2 weeks:
      - Decreased concentration and attention
      - Decreased self-esteem and confidence
      - Feeling of guilt and worthlessness
      - Bleak and pessimistic view of the future
      - Not sleeping well (disturbed sleep)
      - Decreased appetite (eating too little), or eating too much
      - Thoughts of self-harm or suicide
      - Difficulty carrying out usual activities at work, school, home & social situations
    - If the answer is “Yes” to all 3 – A, B, & C – the person probably has Moderate or Severe Depression.
    - If the answer is “Yes” to only 1 or 2 of the three – the person may still be depressed, but not as severely.

## **3. SCREENING TOOLS PHQ9 (MODIFIED TO LIBERIAN ENGLISH BY TIYATIEN HEALTH)**

**Semester IV**

Explain to the patient, “We are going to ask you some questions that will help us know how we can help you. When you answer, we would like you to think about **ONLY** the past **TWO** weeks, even if your problems have lasted for much longer.” Then ask the following questions:

Since the Past 2 Weeks	Never	Few Times	Plenty Times	Nearly Every Day
1. Have you been feeling not happy when you are doing things? Or Have you been feeling your heart can't be there to do anything?	0	1	2	3
2. Have you been feeling down-hearted, overloaded, or like you are having no hopes?	0	1	2	3
3. Have you had trouble falling asleep, staying asleep, or sleeping over-plus?	0	1	2	3
4. Have you been feeling weak or tired, or like you have little strength when working?	0	1	2	3
5. Do you sometimes feel like you can't eat? Or do you sometimes eat over-plus?	0	1	2	3
6. Do you ever feel bad about yourself, or ashamed of your problems? Or Do you feel that nothing good will come out of you?	0	1	2	3
7. Do you sometimes only complete your work half-way because you are thinking plenty? Or Do you feel like your mind can't be there when doing your housework?	0	1	2	3
8. Have people noticed that you are moving and talking very slowly? [GIVE TIME TO ANSWER] Have they noticed the opposite-that you are too active, so that you are moving around without doing anything?	0	1	2	3
9. Do you sometimes think it is better that you die, or think of doing harm to yourself?	0	1	2	3
<b>Add the scores from each question for Total Score:</b> _____	= _____	+ _____	+ _____	

Original source of PHQ-9 – Spitzer R, Kroenke K, Williams J, et.al. With an educational grant from Pfizer, in PRIME MD TODAY, 1999. Copyright Pfizer, Inc. Tiyatien Health contributors to Liberian version – Danielle Alkov, Matt Burkey, Othello Davis, Moses Gramoe, Bent Grant, Katie Kentoffio, Patrick Lee, Tina Mouwan, Amisha Raja, Hemali Thakkar, & Kalisa Yesero.

Score interpretation (Range: 0–27):

0 – 4 = No depression

5 – 14 = Possible depression requiring support and education – Treat if you have had some training, or refer to a Mental Health Clinician

15+ = Very likely severe depression requiring medication, support, and education – it is best to refer this patient immediately to a Mental Health Clinician.



Functional Impairment Tool. Now ask:

How hard have you found it to do some of your work, to do your housework, to take care of your children, or to go around your friends and family because of these problems?	Not Hard	Hard Small	Very Hard
Functional Impairment	No	Small	Yes

If the total PHQ-9 score > 17, & functional impairment also is definitely present, refer the patient to a mental health clinician for treatment.

#### 4. MANAGEMENT:

- Manage comorbidities – Now look for physical illnesses which occur frequently with depression (in some cases even cause it). Take a good history and do a physical examination. Common co-morbid illnesses are:
  - Hypothyroidism (also a cause of depression)
  - Anemia
  - Cancer
  - Stroke
  - Hypertension (sometimes with headache)
  - Diabetes
  - HIV
  - Alcoholism
- In addition to treating depression, also treat any co-morbid illnesses. Note some drugs such as steroids may also cause depression.
- Educate the patient and caretakers about the causes, symptoms, effects, treatment, and usual course of depression.
- Assure and reassure the patient that depression can be treated and usually improves.
- Look for stressful situations (psychosocial stressors) which may have brought on the depression. Discuss them & help the patient to choose possible ways to resolve them.
- Encourage physical activity – physical activity decreases depression.
- Encourage the patient to become socially active again – with members of his own household and with others with whom he previously liked to spent time.

## 5. TREATMENT:

- Best to send patients to a Mental Health Clinician, if you have not been trained as a Mental Health Clinician and must treat the patient in your clinic, do the following:
  - For moderate or severe depression, or mildly depressed patients not improving in 6–8 weeks, a clinician may prescribe an antidepressant such as one of these below:
  - FLUOXETINE 20 mg. caps-Start with 1 daily; if no improvement within 4 weeks may increase to 40 mg. This is an SSRI (Selective Serotonin Reuptake Inhibitor)
  - AMITRIPTYLINE 25 mg. tablets (tricyclic anti-depressant) – Start with 50 to 75 mg. H. S., or 25 mg. t.i.d. If not improving may increase gradually to 150 mg. total per day. IMIPRAMINE 25 mg. tablets (tricyclic anti-depressant) – Start with 25 mg. t.i.d. (or 75 mg. H.S.). If not improving, may increase gradually to 50 mg. t.i.d. (150 mg. /day total).
- Side effects and caution:
  - Side effects of each medication
  - Cautions

## 6. ANXIETY DISORDERS:

- Description
- Causes:
  - Stressful life events
  - Trauma
- Signs and symptoms:
  - Increase palpitations
  - A feeling of suffocation
  - Dizziness or headaches
  - Sweating
  - Trembling or shaking all over
  - Loss of appetite
  - Sleeping disorders
  - Intense fear, nervousness, or worry
  - Difficulty concentrating

- Thoughts of dying, losing control, or going mad
- Repeatedly thinking the same distressing thoughts again and again despite efforts to stop thinking them
- Going out of their way to avoid situations that cause fear
- Nervous
- Cannot sleep well
- Sometimes headache, heartburn, epigastric pain, or belching
- Ask:
  - When did the symptoms begin?
  - How severe are they?
  - Have you had previous treatment?
  - Do you have pain?
  - Any headache, heartburn, epigastric pain or belching?
  - Any recent very stressful situations?
  - Any history of significant trauma?
  - Take the blood pressure, pulse, temperature and weight. Look for other possible illnesses causing the symptoms:
    - Is the patient pale? (anemia causing the symptoms)
    - Does the patient have distended neck veins, large liver, shortness-of-breath, and ankle edema? (congestive heart failure causing anxiety)
    - Is the stool black? (bleeding ulcer causing anemia)
    - Bulging eyes and rapid pulse? (hyperthyroidism)
    - Diagnosis

#### Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at All	Several Days	Over Half the Days	Nearly Every Day
1. Feeling nervous, anxious, or on edge	1	2	3	4
2. Not being able to stop or control worrying	1	2	3	4
3. Worrying too much about different things	1	2	3	4
4. Trouble relaxing	1	2	3	4
5. Being so restless that it's hard to sit still	1	2	3	4

## Semester IV

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at All	Several Days	Over Half the Days	Nearly Every Day
6. Becoming easily annoyed or irritable	1	2	3	4
7. Feeling afraid as if something awful might	1	2	3	4

Original Source: Spitzer R, Kroenke K, Williams J, Lowe B. A brief measure for assessing generalized anxiety disorder. The GAD-7. Arch Int Med. 2006; 166:1092–1097. Copyright (2006) American Medical Association.

### Interpretation of GAD-7:

Scores: 0–4 – No anxiety disorder

5–9 – Likely a Mild anxiety disorder

10–14 – Likely a Moderate anxiety disorder

15–21 – Severe anxiety disorder

Now choose the correct group below: Be sure the patient only has anxiety – not some illness listed below making him feel anxious-get a good general medical history.

Nervousness/feeling anxious with:

Complaints & Observations	Assessment	Plan of Treatment
1. Right upper abdominal pain, black stool and looking pale	Peptic ulcer with anemia	Refer to hospital (with IV ringers if low BP--hold systolic BP at 80–90)
2. Looking pale and pulse above 92 (Check Hgb to prove anemia and severity)	Anxiety from anemia	Refer to hospital if severe anemia
3. Distended neck veins and edema, short-of-breath	Congestive heart failure	Give Hydrochlorothiazide 50 mg. and refer to hospital
4. Enlarged thyroid with bulging eyes, fast pulse	Toxic goiter	Refer to hospital
5. Nervous, headache and high blood pressure	Hypertension	HTN in chronic diseases (note: may also have <b>anxiety</b> )
6. Nervous and anxious, otherwise well- not pale, no edema, normal pulse and BP	Anxiety (may be chronic)	Do the GAD-7 screen for anxiety in the chart above – the screen helps identify anxiety and its severity

## 7. TREATMENT OF CHRONIC ANXIETY:

- Counseling
- Minor tranquilizing drugs, such as diazepam 5 mg. t.i.d. given for 3 to 5 days only
- Referring the patient to a Mental Health Clinician With the “Open Mole” syndrome, traditional medicine that have proven to not be toxic may also be use also often succeeds in getting the patient to improve.
  - TRADITIONAL MEDICINE -- the ADULT “OPEN MOLD” SYNDROME (Pronounced “Open Mole”)

- “Open Mole” in adults refers to what Western doctors would call a severe form of chronic anxiety. Tribal healers recognize this group of symptoms as a specific illness and believe it is caused by the anterior or the posterior fontanel of the skull opening again in adults. This is believed to be very serious if untreated, but well within the capabilities of tribal medicine to cure. The traditional healer examines the patient's scalp, and if he finds an indentation in the appropriate position in the skull of such a patient, he makes the “diagnosis”. In the Lofa Co. area a 1–1/2-inch-wide strip of hair is shaved over the sagittal suture, and a sticky black “medicine” with leaves is applied to this strip of shaved scalp. The patient feels immediate relief because someone has finally “discovered the cause” of his illness and because the tribal healers have a good reputation for curing it. With time, reassurance, faith in the healer and further applications of the sticky black “medicine” the patient usually slowly improves. X-rays will show that no opening of the sutures of the skull or the fontanels has actually taken place. Usually the person who believes he has an Open Mole will refuse medical treatment and insist on traditional medicine.

## **8. POST TRAUMATIC STRESS DISORDER:**

- Description:
  - Post: After, following
  - Trauma: Pain, hurt, shock, injured, wound
  - Stress: exhausted, depressed, burdened, worry, tension
  - Disorder: abnormal, unbalance, uneasy
- Four characteristics of PTSD according to Van de Keelk (1987):
  - A surprising occurrence
  - Of piercing intensity
  - That is outside the range of human experience
  - Frightens almost anyone
- Causes:
  - The patient was involved in, witness to, or confronted by one or more life threatening events
- Signs and symptoms of PTSD:
  - Flash back
  - Avoidance
  - Hyper-vigilant

## Semester IV

- Examples:
  - They have no show of motivation
  - They cannot concentrate
  - They experience hopelessness – no hope for the future
  - They show lack of interest in activities and other people
  - They become chronically irritable and easily become angry and violent
  - They become pre-occupied with the traumatic experience
  - They procrastinate
  - They have difficulty making decisions
  - They become Rebellious - and do the obviously wrong things
  - Even a little sound can excite or make them afraid
  - They may be unable to sleep
  - They may try to avoid people or places associated with the trauma
  - Students do not do well in school
  - They develop psychosomatic illnesses (such as headache, stomach or other body aches), high blood pressure, or may complain of open mole
  - They easily become tired
  - Changes in emotions, appetite, sexual drive, sleep pattern
- Diagnosis:
  - Ask the following 10 questions. A “yes” response to 6 or more indicates a very strong possibility of the client having PTSD. (It is best to wait at least 3 weeks after the event before administering the TSQ.)

### Trauma Screening Questionnaire (TSQ) for helping identify PTSD

In the last 2 weeks, have you had (or have you been):	Yes, at least twice in the past week	No
Upsetting thoughts or memories about the event that have come into your mind against your will?		
Upsetting dreams about the event?		
Acting or feeling as if the event were happening again?		
Feeling upset by things that remind you of the event?		
Body reactions (such as fast heartbeat, stomach churning, sweating or feeling dizzy) when reminded of the event?		
Difficulty falling asleep or staying asleep?		
Irritability or outbursts of anger?		

In the last 2 weeks, have you had (or have you been):	Yes, at least twice in the past week	No
Difficulty concentrating?		
Feeling much more aware of possible dangers to yourself and others?		
Being jumpy or startled at something unexpected?		

Original Source: Brewin, C.R., et.al. (2002) Brief Screening Instrument for post-traumatic stress disorder. *British Journal of Psychiatry*, 181, 158-162.

- The PC-PTSD is a 4-item screen:
  - Designed for use in primary care and other medical setting
  - Currently used to screen for PTSD in veterans at the VA

### Instructions

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you:	Yes or No
Have had nightmares (bad dreams) about it or thought about it when you did not want to?	Yes/No
Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?	Yes/No
Were constantly on guard, watchful, or easily startled (jumpy)?	Yes/No
Felt numb (no feelings) or detached from others, do not want to take part in activities in your community, church, mosque, school, or your surroundings?	Yes/No

Prins, Ouimette, Kimerling et al. 2003

- Interpretation:
  - The authors suggest that in most circumstances the results of the PC-PTSD should be considered “positive” if a patient answers “yes” to any 3 items.
  - Those screening positive should then be assessed with a structured interview for PTSD.
  - Current research suggests that the results of the PC-PTSD should be considered “positive” if a patient answers “yes” to any three items.
- Management:
  - Try to establish a cordial relationship with the patient as much as possible
  - Observe good listening techniques – listening, showing interest, and being empathetic is very important
  - Provide psychological first aid (PFA) for all who have experienced any trauma:
  - Listen as they would like you to
  - Provide privacy for talking with the person

## Semester IV

- Encourage individuals to identify small steps toward recovery (such steps as seem appropriate for each person) and to take those steps as much as they can
- Assess the client's level of understanding of "Post Traumatic Stress Disorder"
- Teach about the disorder
- Explore with the client what situations give the most unfavorable feelings
- Explore what they enjoy doing with less stress
- Consider using anti-depressants to treat significant symptoms of anxiety and/or depression such as Fluoxetine 20 mg. daily.
- See the patient again every 2–4 weeks to listen and give further encouragement, and to monitor symptoms and effectiveness of treatment.
- May give diazepam 5 mg. t.i.d. for short periods of time (no longer than 3 to 5 days to avoid addiction) when symptoms of anxiety are the most severe.

## 9. PSYCHOSIS:

- Description:
  - Abnormal actions, thoughts, and speech = psychosis
  - Psychosis can be chronic or acute
  - Untreated psychosis can lead to brain damage
  - Signs and symptoms:
    - Hallucinations:
      - Disturbed perceptions of the senses -hearing, seeing, feeling, smelling
    - Delusions:
      - Ideas that don't correspond with reality that patients generally believe with absolute conviction, and will not change their minds even if shown proof to the contrary or if the belief is obviously impossible or bizarre.
      - Unusual or bizarre behavior
      - Chaotic or extremely mute behavior
      - Personality changes
      - Difficulty with social interaction
      - Incoherent speech
      - Disorganized thinking
- Management:
  - Refer the patient immediately. Psychosis is a mental illness that can be treated with anti-psychotic medication



- Chlorpromazine, 25 mg. b.i.d. to 100 mg. b.i.d.
- Mania
- Extremely elevated mood
- Unusually high energy
- Unusual thought patterns
- Unusually busy, agitated, or irritable
- Symptoms:
  - Extreme high self-esteem, the feeling of being the greatest
  - Unwillingness to sleep
  - Speaking a lot or much more than usual
  - Feeling of fast thinking
  - Constantly distracted, poor concentration
  - Increased libido and sexually risky behavior
  - Physical restlessness
  - Crying and laughing
  - Can also have delusions and hallucinations
  - Anxiety and paranoia
  - Uncontrolled sexual behavior
- If you suspect that a patient may be violent or suicidal, take appropriate precautions. Inform family members:
  - Rule out physical cases whenever possible.
  - Refer the patient to a higher level of care for a mental assessment.
  - Remember, the disease can be controlled or treated
  - Do not stigmatize the patient. The person can be useful and reintegrated into

## **10. MANIC-DEPRESSIVE DISORDER:**

- Bipolar Disorder:
  - If the patient has depression, check for the possibility of Bipolar Disorder (manic episodes). Consider the patient to have Bipolar Disorder if previously diagnosed as such, or with a history of 3 or more of the following situations for more than 3 weeks:
    - Extremely elevated mood
    - Extremely talkative, with a flight of ideas

## Semester IV

- Extremely decreased need for sleep
- Feeling that he is great (grandiose ideation)
- Easily distracted
- Reckless behavior
- Depression and signs of depression
- Bipolar Disorder has to be treated differently. If Bipolar Disorder is probable, send the patient to a mental health clinician or hospital for treatment.

## 11. ALCOHOL AND SUBSTANCE ABUSE – ALCOHOL, DRUGS, RELATED SUBSTANCES

### The CAGE Questionnaire Adapted to Include Drugs (CAGE-AID)

CAGE Screen to help identify problem with alcohol or drugs	No	Yes
1. Have you felt you should cut down on your drinking or drug use?	0	1
2. Have people made you vex by criticizing you or lecturing you about your drinking or drug use?	0	1
3. Have you felt bad or sorry or guilty about your drinking or drug use?	0	1
4. Have you ever had a drink or used drugs first thing in the morning to calm your nerves or get over a headache or hangover?	0	1

Source: Modified with use of Liberian English from: J A Ewing "Detecting Alcoholism: The CAGE Questionnaire" JAMA 252: 1905–1907, 1984

Score: /4 (2/4 or greater = positive CAGE, further evaluation is indicated)

- General symptoms include the following:
  - Inability to stop using the substance
  - Frequently using the substance in dangerous or inappropriate situations (e.g. drinking and driving).
  - The person's social life influenced by the substance abuse.
  - Constant craving for the substance and willingness to go to great extremes to get it.

### Brief Drug Abuse Screening Test (B-DAST)

Instructions: The following questions concern information about your involvement and abuse of drugs. Drug abuse refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions and (2) any nonmedical use of drugs. Carefully read each statement and decide whether your answer is "yes" or "no." Then circle the appropriate response.	Yes or No
1. Have you used drugs other than those required for medical reasons?	Yes/No
2. Have you abused prescription drugs?	Yes/No
3. Do you abuse more than one drug at a time?	Yes/No
4. Can you get through the week without using drugs (other than those required for	Yes/No

<b>Instructions:</b> The following questions concern information about your involvement and abuse of drugs. Drug abuse refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions and (2) any nonmedical use of drugs. Carefully read each statement and decide whether your answer is “yes” or “no.” Then circle the appropriate response.	<b>Yes or No</b>
medical reasons)?	
5. Are you always able to stop using drugs when you want to?	Yes/No
6. Have you had “blackouts” or “flashbacks” as a result of drug use?	Yes/No
7. Do you ever feel bad about your drug abuse?	Yes/No
8. Does your spouse (or parents) ever complain about your involvement with drugs?	Yes/No
9. Has drug abuse ever created problems between you and your spouse?	Yes/No
10. Have you ever lost friends because of your use of drugs?	Yes/No
11. Have you ever neglected your family or missed work because of your use of drugs?	Yes/No
12. Have you ever been in trouble at work because of drug abuse?	Yes/No
13. Have you ever lost a job because of drug abuse?	Yes/No
14. Have you gotten into fights when under the influence of drugs?	Yes/No
15. Have you engaged in illegal activities in order to obtain drugs?	Yes/No
16. Have you ever been arrested for possession of illegal drugs?	Yes/No
17. Have you ever experienced withdrawal symptoms as a result of heavy drug intake?	Yes/No
18. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding)?	Yes/No
19. Have you ever gone to anyone for help for a drug problem?	Yes/No
20. Have you ever been involved in a treatment program specifically related to drug use?	Yes/No
<b>Items 4 and 5 are scored in the “no,” or false, direction; each item is 1 point; 6 or more points suggest significant problems.</b>	

From Skinner HA: Addict Behavior 7:363, 1982; Center for Substance Abuse Treatment: Substance abuse treatment for persons with co-occurring disorders. Treatment Improvement Protocol (TIP) Series 42. DHHS Publication No. (SMA) 05-3992, Rockville, MD, 2005, Substance Abuse and Mental Health Services Administration.

## 12. POSTPARTUM PSYCHOSIS:

- Signs and symptoms of postpartum psychosis:
  - Sudden onset
  - Paranoid delusions
  - Hallucinations
  - Agitation and mood disturbances
  - Withdrawal from social situations
  - Infant neglect
- Causes of postpartum psychosis:
  - Physical factors:

## Semester IV

- Febrile illness after delivery
- Postpartum hemorrhage
- Toxemia of pregnancy
- Severe malnutrition
- Hypertension
- Epilepsy
- Previous mental illness

### 13. SCREENING FOR POSTPARTUM DEPRESSION:

- Edinburgh Postnatal Depression Scale (EDPS):
  - The 10-question Edinburgh Postnatal Depression Scale (EPDS) 2 is a valuable, efficient and effective screening tool way of identifying patients at risk for “perinatal” depression.
  - Mothers who score above 13 are likely to be suffering from a depressive illness of varying severity.
  - The scale indicates how the mother has felt during the previous week.
  - The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.
  - Instructions for using the Edinburgh Postnatal Depression Scale:
    - The mother is asked to check the response that comes closest to how she has been feeling in the previous 7 days.
    - All the items must be completed.
    - Care should be taken to avoid the possibility of the mother discussing her answers with others. (Answers come from the mother or pregnant woman.)
    - The mother should complete the scale herself, unless she has limited English or has difficulty with reading.
  - Scoring:
    - Questions 1, 2, & 4 (without an \*) are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.
    - Questions 3, 5–10 (marked with an \*) Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.
    - Maximum score: 30
    - Possible Depression: 10 or greater
    - Always look at item 10 (suicidal thoughts)

**Edinburgh Postnatal Depression Scale 1 (EPDS)**

Name: \_\_\_\_\_ Address: \_\_\_\_\_

Your Date of Birth: \_\_\_\_\_ Health facility: \_\_\_\_\_

Baby's Date of Birth: \_\_\_\_\_ Phone: \_\_\_\_\_

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed. I have felt happy:

- 0 Yes, all the time
- 1 Yes, most of the time – this would mean “I have felt happy most of the time” during the past week
- 2 No, not very often
- 3 No, not at all

Please complete the other questions in the same way. In the past 7 days:

1. I have been able to laugh and see the funny side of things
  - 0 As much as I always could
  - 1 Not quite so much now
  - 2 Definitely not so much now
  - 3 Not at all
2. I have looked forward with enjoyment to things
  - 0 As much as I ever did
  - 1 Rather less than I used to
  - 2 Definitely less than I used to
  - 3 Hardly at all
- \*3. I have blamed myself unnecessarily when things went wrong
  - 3 Yes, most of the time
  - 2 Yes, some of the time
  - 1 Not very often
  - 0 No, never
4. I have been anxious or worried for no good reason
  - 0 No, not at all
  - 1 Hardy ever
  - 2 Yes, sometimes
  - 3 Not ever
- \*5. I have felt scared or panicky for no good reason
  - 3 Yes, quite a lot
  - 2 Yes, sometimes
  - 1 No, not so much
  - 0 No, not at all
- \*6. Things have been getting on top of me
  - 3 Yes, most of the time I haven't been able to cope at all
  - 2 Yes, sometimes I haven't been coping as well
  - 1 No, most of the time I have coped quite well
  - 0 No, I have been coping well as ever
- \*7. I have been so unhappy that I have had difficulty sleeping
  - 3 Yes, most of the time
  - 2 Yes, sometimes
  - 1 Not very often
  - 0 No, not at all
- \*8. I have felt sad or miserable
  - 3 Yes, most of the time
  - 2 Yes, sometimes
  - 1 Not very often
  - 0 No, not at all
- \*9. I have been so unhappy that I have been crying
  - 3 Yes, most of the time
  - 2 Yes, quite often
  - 1 Not very often
  - 0 Not at all
- \*10. The thought of harming someone has occurred
  - 3 Yes, quite often
  - 2 Sometimes
  - 1 Hardly ever
  - 0 Never

Administered/Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

## Semester IV

### Reference

Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782–786.

2 Source: K. L. Wisner, B. L. Parry, C. M. Piontek, *Postpartum Depression N Engl J Med* vol. 347, No 3, July 18, 2002, 194–199

### **14. MANAGEMENT OF POSTPARTUM PSYCHOSIS:**

- Evaluate suicidal potential
- Separate infant and arrange for infant to breastfeed under supervision of responsible relative
- Hydration and nutrition
- Reassurance and counseling
- Referral and hospitalization
- Preventive measures for postpartum psychosis

### **15. IMPROVED PRENATAL AND POSTNATAL CARE TO REDUCE THE COMPLICATIONS OF PREGNANCY:**

- Patients at risk to have early postpartum checkups
- Early treatment of any complication, physical or psychological
- Education (IEC/BCC) on dangers of toxic drugs used by traditional healers

### **16. SEXUAL GENDER BASED VIOLENCE:**

- Definition
- Types of Sexual Violence:
  - Rape and marital rape
  - Child sexual abuse, defilement and incest
  - Forced sodomy/anal rape
  - Attempted rape or attempted forced sodom/anal rape
  - Sexual abuse (ex. inappropriate touching)
  - Sexual exploitation
  - Forced prostitution
  - Sexual harassment
  - Sexual violence as a weapon of war and torture

- Consequences of SGBV:
  - Severe health and psycho-social problems
  - Sometimes death
  - Potential for debilitating long-term effects of emotional and physical trauma
  - Serious and potentially life threatening health outcomes
  - Physical outcomes:
    - Acute physical, chronic and reproductive outcomes:
      - Injury
      - Shock
      - Disease
      - Infection
      - Maternal mortality
      - Infant mortality – disability
      - Somatic complaints
      - Chronic Infections
      - Gastrointestinal problems
      - Eating disorders
      - Sleep disorders
      - Alcohol/drug abuse
  - Psycho-social outcomes:
    - Emotional and psychological outcomes and social consequences:
      - Post-traumatic stress
      - Depression
      - Anxiety, fear
      - Anger
      - Shame, insecurity, self-hate and self-blame
      - Mental illness
      - Suicidal thoughts, behavior Blaming the victim/survivor
      - Loss of role/functions in society (e.g., earn income, child care)
      - Social stigma
      - Social rejection and isolation
      - Feminization of poverty

## Semester IV

- Increased gender inequalities
- Sexual complications:
  - Sexual aversion
  - Dyspareunia
  - Frigidity
  - Intimacy problems
- Ethical and legal issues related to SGBV:
  - Ethics:
    - Description
- The rights of SGBV Survivors:
  - The right to health
  - The right to human dignity
  - The right to non-discrimination
  - The right to self-determination
  - The right to information
  - The right to privacy
  - The right to confidentiality
  - Responsibilities of health provider to adhere to:
    - Autonomy: the right of patients or patient <18 years parents or guardian should make decision on their behalf. All steps taken are based on an informed consent.
    - Beneficence: the duty or obligation to act in the best interest of the patient.
    - Non-maleficence: the duty or obligation to avoid harm to the patient
    - Justice of Fairness: doing and giving what is rightfully due.
    - Respect: showing respect for clients as individuals regardless of the cultural background, health status, religion, socio-economic status etc.
    - Confidentiality: sharing only the necessary information, as requested and as agreed by the victims/survivors.
    - Legal Implications – SGBV violates the human rights
    - Assessment to identify psychosocial and sexual complications stemming from SGBV



- Consequences of SGBV:
  - Survivors of rape and sexual abuse are at increased risk of experiencing a range of symptoms:
    - Psychological and emotional symptoms or consequences
    - Uncontrollable emotions such as fear, feeling of bitterness and anger, feeling of guilt, shame, floating anxiety, feeling of hatred (explain gently that rape is always the fault of the perpetrator and never the fault of the survivor).
    - Mood swing
    - Nightmares and sleeping disorders
    - Eating disorders
    - Suicidal thoughts or suicide attempts
    - Confusion/embarrassment
    - Feeling of humiliation
    - Numbness
    - Intrusive memories
    - Sense of powerlessness
    - Depression
    - Hostility or aggressive behavior
    - Inability to distinguish affectionate from sexual behavior
    - Frustration
    - Hallucination
    - Difficulties in concentration and learning
    - Panic attacks
    - Embarrassment
    - Feeling of being dirty
    - Post-traumatic stress symptoms
- Social consequences:
  - The victim may suffer social stigmatization: which results in further emotional damage, including shame, self-hate and depression. Presence of a child from rape creates further psychological and social problems for the mother and child.
  - Divorce
  - Rejection and isolation
  - Dishonor

## Semester IV

- Social withdrawal
- Having a child from the rape
- Sexual Problems:
  - Frigidity
  - Dyspareunia
  - Unwanted pregnancy
  - Feeling of being a sexual object
  - Abortion
  - Intimacy problems
  - Sexual aversion
- SGBV as a Trauma:
  - Signs of trauma:
    - Being unable to stop thinking about the event
    - Continuing to react fearfully even when the danger has passed
    - Being easily reminded of the event by things that are not very related
    - Increased difficulty in controlling emotions
    - Nightmares about the event
    - Being easily irritated
    - Having a low tolerance for stress
    - Being easily startled
    - Losing a sense of reality
    - Having suicidal thoughts
    - Hallucination, rigidity, delusion, depression
- SGBV and post-traumatic stress disorders (PTSD):
  - **Post:** After, following
  - **Trauma:** Pain, hurt, shock, injured, wound
  - **Stress:** Exhausted, depressed, burdened, worry, tension
  - **Disorder:** Abnormal, unbalance, uneasy
  - Four characteristics of PTSD according to Van de Keelk (1987):
    - A surprising occurrence
    - Of piercing intensity

- That is outside the range of human experience
- Frightens almost anyone
- Role of service providers:
  - Tell the survivor that she has experienced a serious physical and emotional trauma.
  - Advise her about the PTSD that she may experience.
  - Respond compassionate to survivor
  - Take all actions guided by respect for the wishes, the rights and the dignity of the victims/survivors.
  - Important factors to consider when doing interview of a SGBV survivor:
    - Conduct interview at patient's wish.
    - Apply good listening skills when taking the story
    - Be observant; make critical and positive interference-observe case (keep it short and simple).
    - Ask relevant questions in a gentle way.
    - Be patient; do not press for more information if the victim/survivor is not ready to speak about her experience.
    - Guarantee confidentiality.
    - Respect the wishes of the patient.
    - Take traditional background of the client into account.
    - Let the client have her own pace.
    - Let the client discuss subject that interests her.
    - Be able to direct communication toward the goal of the interviewer.
    - Open up more talking (i.e. Tell me more about it; go on in that area, that interests me, etc.).
    - Reflect-repeat carefully selected words that the client had said
    - Give the survivor the opportunity to ask questions and voice her concerns.
    - Listen but do not force her to talk about the event and ensure that her basic needs are met.
    - Do not push survivors to share their personal experiences beyond what they would naturally share.
    - Ask the survivor if she has a safe place to go to and if someone she trusts will accompany her. If she has no safe place to go immediately, efforts should be made to find one for her.
    - Support the client throughout the interview to give her psychological strength.

## Semester IV

- Points to note:
  - Approach a social worker when the client refuses to engage in any form of interview.
  - Approach a social worker when the client needs other assistance than medical care (i.e. Legal, Psycho-social, Referral, etc.)

### 17. USING COUNSELING SKILLS:

- Definition of counseling
- To create this trusting relationship, the counselor should:
  - Prepare a comfortable seating
  - Respect the privacy and confidentiality (discussion cannot be overheard by other people)
  - Be patient as the survivor may find it hard to express her experience and feelings initially
  - Show concern throughout the session, listen carefully and empathetically, and observe non-verbal clues
  - Have appropriate facial expressions; i.e. if the client cries the counselor's facial expression should show sympathy and concern
  - Show respect for uniqueness
  - Use open-ended questions to offer the client the chance to explain things in some details
  - Have non-judgmental attitudes
  - Make good eye contact from time to time to check that you have heard her correctly and avoid misunderstanding
- During the counseling session:
  - Observe the mental status of the client:
    - Alertness – attentiveness
    - Behavior – speech
    - Support
    - Mood – how she feels like?
    - Affected – how she looks like?
    - Appropriate?
    - Thought process – flights of ideas?
    - Thought content – are they in contact with reality?

- Knowledge – oriented to time and place?
- Judgment – insight

**18. PROFESSIONAL ISSUES IN PSYCHIATRIC MENTAL HEALTH:**

- Legal implications
- Selected Psychiatric disorders common in children
- Dementias

# Psychiatric Mental Health

## **Clinical Course Description:**

This clinical course will enable the learners to apply theoretical knowledge and develop skills and competencies in assessment and management of individuals with mental health/psychiatric problems using appropriate interventions. Learners will be expected to collaborate with multi-disciplinary and multi-sectorial teams.

## **Clinical Course Objectives:**

- Demonstrate skills in assessment, diagnosis and management of a variety of mental health conditions in diverse settings throughout the lifespan
- Apply principles of care provision for identified mental health/psychiatric conditions
- Demonstrate therapeutic communication and interpersonal skills when interacting with individuals, families and communities
- Collaborate with multidisciplinary/multi-sectorial team in delivery of mental health care in a variety of settings
- Implement mental health promotion activities in supportive mental health environments.
- Create and maintain therapeutic milieu conducive to the management of a variety of mental health/psychiatric conditions.

## **Clinical Placement:**

- Hospital Wards
- Out-Patient Department
- Community Health Department
- Emergency Room
- Community

## **Clinical Skills:**

- Assessment of Mental Status of patients
- Counselling
- Application of Mental status tools (DSM-IV, Glasgow Coma Scale)
- Documentation

**Competencies**

Knowledge	Attitudes/Behavior	Skills
Demonstrates understanding of the diversity of the human condition	Values the inherent worth and uniqueness of individuals and populations	Understands how human behavior is affected by socioeconomics, culture, race, spiritual beliefs, gender, lifestyle, and age
Understands human behavior, mental processes, and individual and group performance		Provides holistic care that addresses the needs of diverse populations across the life span
		Works collaboratively with health care providers from diverse backgrounds
		Understands the effects of health and social policies on persons from diverse backgrounds

**Teaching/Learning Strategies:**

- Lectures
- Group discussion
- Clinical observation
- Internet
- Visual aids
- Handouts
- Problem-based learning
- Role plays
- Seminar presentations
- Reflection on case presentations by learners;
- Individual and group assignments

**Instructional Materials:**

*Textbooks and References:*

*Psychiatric-Mental Health Nursing, 2nd Ed., Barbara S. Johnson.*

*Essentials of Mental Health Nursing, 3rd Ed., Fontaine and Fletcher.*

## Semester IV

*Medicine in the Tropics: Mental Health and Disease in Africa*, Charles R. Swift, and Toleni Asuni.

Mertens Paul: *A Handbook for Health Workers in Liberia*, 2011

Ministry of Health & Social Welfare, Republic of Liberia, *Module On Mental Health- For Health Workers in the Clinical Areas*, Basic Package of Health Services, 2009

Uys, L.R. and Middleton L. (2010). *Mental health Nursing: A South-African Perspective*. Juta and Company : Cape Town

Stuart & Sundeen . *Principles & Practice of Psychiatric Nursing*. Latest Edition Mosby.

### Course Expectations:

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

### Assessment

- Weekly case presentations
- Oral examination
- OSCE
- Casebook/ logbook evaluation
- Reflective Diary

### Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%



# Course Title: Pediatrics I

**Credits:**

3 credits

**Placement:**

Second semester of second year

**Duration:**

16 Weeks (14 instructional and 2 exams)

42 hours classroom

126 hours laboratory and clinical

**Pre-requisites:**

Health Assessment; PHC-II; Pharmacology and Dosage Calculation, Medical and Surgical care

**Introduction/Course Description:**

This course is part I of a two part pediatric course that is designed to enable the students to acquire the appropriate knowledge, skills and attitudes of professional health workers who provides health care for children, from birth to adolescence. The course builds on and assumes knowledge of newborn care, and care of the neonate to age two months. It also provides an introduction to pediatrics and focuses on addressing well child care, health promotion, and growth and development.

**Broad Objectives:**

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

- Discuss the care of the child, family and community
- Discuss growth and development as well as nutritional status of a child and how these affect the child
- Implement health promotion and prevention strategies appropriate at each age level
- Interpret the concepts of child development
- Advise and assist mothers in promoting appropriate growth and development preventing childhood diseases, malnutrition, intestinal parasites, anemia, etc.
- Apply developmentally appropriate methods in providing care to the child
- Provide care for the well child

## Semester IV

### Specific Objectives:

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

- Define major terms used in pediatrics
- Describe the roles of the Pediatric care provider
- Demonstrate respectful and effective interactions with children and their parents
- Describe the role of local, national and international organizations in pediatric care in Liberia
- Explain child care practices commonly followed in Liberia
- Discuss and use play as an intervention
- Discuss trends in the development of child care in Liberia
- Describe patterns of growth and development in anatomy, physiology, cognition, psychosocial and emotional domains
- Explain factors influencing growth and development
- Describe physical, emotional, psychosocial, cognitive, and moral developmental expectations and needs for infants, toddlers, preschoolers, school age children and adolescents
- Recognize and interpret deviations from normal in developmental expectations
- Identify, developmentally appropriate methods that are used to perform, record and interpret physical assessments and measurements on infants, children and adolescents
- Obtain, record and interpret a child health history
- Take, record and interpret vital signs
- Provide nutritional counseling to mothers of infants and children
- Provide developmental surveillance – anticipatory guidance and health screening
- Correctly record weight and height on the Road-to-Health Cards
- Assess signs and symptoms of illness, and nutritional and immunization status
- Counsel the mother about feeding and when to return to the clinic.
- Discuss manifestations and impact of EPI Targeted diseases in Liberia
- List the names, types, dosage, timing/schedule and methods of administration of vaccinations on the immunization schedule

- Demonstrate the correct procedure for the administration of each type of vaccines safely and effectively
- Explain contraindications for administering vaccine in under-five clinics
- Describe the side effects of each vaccination, its timing and management
- Discuss proper storage and disposal of vaccines and equipment
- Plan and conduct immunization sessions
- Advocate for health promotion for children and their families at the local and state level
- Advise and assist mothers in preventing childhood diseases, malnutrition, intestinal parasites, anemia, etc.
- Identify and discuss the cause of the four types of accident in children
- Describe prevention measure to be taken to avoid the above accidents
- Discuss safety measures appropriate each development stage especially, for prevention of accident
- Describe first aid measures to be taken in class of the above listed accidents

**Course Content:**

**Unit I | Introduction to Child Care/Pediatrics**

**1. DEFINITIONS:**

- Pediatrics
- Pediatric care
- Terms in pediatric care:
  - Historical development of paediatric
  - Theories and theorists

**2. FAMILY-CENTERED CARE FOR THE PEDIATRIC PATIENT**

**3. THE ROLE OF THE PEDIATRIC CARE PROVIDER**

**4. SPECIAL CONSIDERATION IN PAEDIATRIC CARE**

**5. ETHICAL AND CULTURAL ISSUES IN PAEDIATRIC CARE**

**6. NATIONAL HEALTH PROGRAMS RELATED TO CHILD HEALTH**

**7. LOCAL AND INTERNATIONAL ORGANIZATIONS RESPONSIBLE FOR CHILD HEALTH IN LIBERIA:**

- UNICEF
- NGOs - Save the Children, Child Fund, and Antoinette Tubman Cheshire Home
- Others

**8. CULTURAL NORMS AND INFLUENCES ON CHILD CARE:**

- Schools
- Organized day care
- Orphanages
- Traditional schools
- Child rearing practices
- Urban migration
- Sexual promiscuity

**9. FEEDING:**

- Cultural feeding practices:
  - Feeding methods:
    - Breast feeding
    - Spoon feeding
    - Cup feeding
    - Bottle feeding
    - Weaning practices and methods
    - Supplementary foods
- Guidelines for starting weaning food:
  - Emphasizing local foods
  - Preparation and storage
  - Micro nutrients
- Factors influencing feeding methods:
  - Benefits
  - Health conditions

- Feeding problems

#### **10. SAFETY FOR THE UNDER-FIVE CHILD:**

- Safe sleep
- Malaria prevention
- Home safety
- Transportation safety
- Water safety
- Safe storage of toxic substances and medications
- Prevention of injury
- Promoting the infant and child's mental health
- Safe parenting practices
- Effective discipline at each age group
- Food safety
- Clean water

#### **11. FAMILY HEALTH SERVICES:**

- Mental health and social work
- UNICEF
- WHO
- Bilateral AID Organizations - USAID
- SOS village
- UNFPA

## **Unit II | Growth and Development**

### **1. DEFINITION**

### **2. PRINCIPLES OF GROWTH AND DEVELOPMENT**

### **3. CONCEPTS AND THEORIES OF GROWTH AND DEVELOPMENT**

## Semester IV

### 4. PATTERNS OF GROWTH AND DEVELOPMENT:

- Cephalo-caudal
- Proximal-distal
- Gross motor to fine motor
- The growth sequence

### 5. STAGES OF GROWTH:

- Infant
- Toddler
- Pre-schooler
- School age children
- Adolescent
- Types of Growth And Development At Each Stage:
  - Physical
  - Emotional/mental
  - Psycho-social
  - Cognitive
  - Sexual
  - Needs and problems at each stage

### 6. PSYCHOSOCIAL PARAMETERS:

- Language
- Interactive social skills
- Sensory motor development
- Emotional support
- Effect of separation from significant caretaker
- Development of different modes of play
- Milestones
- Development tasks

- Discipline
- Normal variations in behaviors
- Eating habits

#### **7. FACTORS INFLUENCING GROWTH AND DEVELOPMENT:**

- Genetic
- Nutritional
- Endocrine
- Environmental
- Disease conditions
- Play for the child
- Developmental milestones
- Developmental tasks and special needs

### **Unit III | The Well Child, Under Five**

#### **1. HEALTH CARE FOR THE WELL CHILD:**

- Pediatric Clinics
- Adolescent friendly services
- MOHSW and pediatric care- child health in the EPHS
- Policies and other documents related to child health:
  - Child survival and other child health policies and protocols
  - Reproductive health policy
  - Community health policy and strategy
- Under-five clinics:
  - Supplies and equipment for the clinics
  - Growth Monitoring-nutrition
  - Importance of weighing and measuring heights
  - MUAC

## **Semester IV**

- Record system
- Road-to-Health cards
- Health education/BCC
- Immunizations
- Steps in caring for a child:
  - Care of a healthy child

## **Unit IV | Pediatric Assessment**

### **1. OVERVIEW OF CHILD ASSESSMENT**

### **2. NUTRITIONAL ASSESSMENT**

### **3. DEVELOPMENTAL ASSESSMENT**

### **4. TECHNIQUES AND GUIDELINES FOR TAKING AND RECORDING A PEDIATRIC MEDICAL HISTORY**

### **5. PHYSICAL EXAMINATION OF CHILDREN:**

- Techniques appropriate for each age
- Privacy and autonomy for each age

### **6. GROWTH MONITORING AND RECORDING USING ROAD TO HEALTH CHARTS:**

- Weight
- Height
- Head circumference
- Arm circumference
- Triceps
- Skin folds
- MAUC
- Recording on the Road to Health care
- Instruction of families regarding the road to health charts



## **7. PARAMETERS FOR MEASURING GROWTH:**

- Head circumference
- Weight and height
- Arm circumference
- Dentition
- Locomotion

## **Unit V | Pediatric Interventions**

### **1. GENERAL PHYSICAL CARE AND PERSONAL HYGIENE**

### **2. SAFETY MEASURES:**

- Environmental factors
- Use of restraints
- Transporting children/car seats
- Limit setting
- Positions for procedures

### **3. PROCEDURES FOR VITAL SIGNS:**

- Temperature
- Blood pressure
- Pulse and respiration
- Precautions and safety measures to be observed
- Recording
- Interpretation of findings
- Normal
- Abnormal
- Immunizations:
  - Purpose
  - Types of childhood immunization and route of administration

## Semester IV

- Proper Storage and disposal of vaccine:
  - Cold Chain
  - VVM
  - Expiration dates
  - Disposal of equipment
  - Ordering of vaccine
  - Record keeping
  - Schedule for immunization
  - Contraindications
  - Side effects and management of them
- How to plan immunization sessions:
  - Routine
  - Supplemental immunization activities
  - How to conduct immunization sessions
- Other activities in the immunization clinic:
  - De-worming
- Vitamin-A supplement
- Accidents in children:
  - Common types of accidents:
    - Poisoning
    - Laceration/Abrasions
    - Foreign bodies
    - Burns
    - Fractures
    - Drowning
  - Common cause of accident in the under-five:
    - Fire
    - Disinfectants
    - Medicines
    - Broken glass
    - Unprotected water sources
    - Road traffic
    - Others
  - Prevention of Accidents

# Clinical Description

This course will help the learner enhance the skills and knowledge drawn from Fundamentals of Midwifery clinical experiences while working with sick/well children and their families in the hospital and community setting.

## Clinical Objectives:

- Develop individualized care plans
- Deliver appropriate care to the paediatric client based on diagnosis, age and developmental stage
- Work effectively with other members of the health team to improve care of children and their families
- Educate the client and family about available support that can help with difficulties concerning child diagnosis and treatment
- Uses relevant cultural norms and practices to communicate with clients, families and team
- Demonstrate good documentation of patient care

## Clinical Skills:

- Admitting a child
- Bathing a child
- Calculating paediatric drug dosages and IV fluids
- Administering Oxygen
- Inserting Naso-gastric tube
- Inserting Urine Catheter
- Preparing a child for surgery
- Making beds for pediatric clients
- Preparing Care plans for pediatric clients

## Clinical Placement:

- Paediatric Units
- Outpatient Departments

## Semester IV

- Clinics
- Health Centres
- Schools (Primary and Secondary)

## Competencies

Knowledge	Attitude/Behaviours	Skills
Uses knowledge from midwifery, health and other disciplines combined with best available evidence to explain nursing decisions and interventions	Values the importance of midwifery data to improve midwifery practice	Individually, or as a member of a group, uses information effectively to accomplish a specific purpose
Demonstrates understanding of the diversity of the human condition	Values the inherent worth and uniqueness of individuals and populations	Provides holistic care that addresses the needs of diverse populations across the life span  Understands the effects of health and social policies on persons from diverse backgrounds
Explains the role of evidence in determining best clinical practice	Questions the rationale of supporting routine approaches to care processes and decisions  Values the need for continuous improvement in clinical practice based on new knowledge	Facilitates integration of new evidence into standards of practice, policies, and practice guidelines
Understands that care and services are delivered in a variety of settings along a continuum of care that can be accessed at any point	Values assessing health care situations “through patient’s eyes”	Assesses patient values, preferences, decisional capacity, and expressed needs as part of ongoing assessment, clinical interview, implementation of care plan, and evaluation of care
Understands that legal, political, regulatory and economic factors influence the delivery of patient care	Appreciates that legal, political, regulatory and economic factors influence the delivery of patient care  Values the need to remain informed of how legal, political, regulatory, and economic factors impact professional practice	Provides care based on current legal, political, regulatory, and economic requirements  Articulates issues at the work unit level that impact care delivery
Differentiates clinical opinion from research and evidence summaries	Appreciates that the strength and relevance of evidence should be determinants when choosing clinical interventions	Applies original research and evidence reports related to area of practice  Contributes to the integration of best current evidence into Microsystems practices

Knowledge	Attitude/Behaviours	Skills
Identifies contributions of other individuals and groups in helping patients and families achieve health goals	Respects the centrality of the patient and family as core members of any health care team	Participates in the use of quality indicators and core measures to evaluate the effect of changes in the delivery of care
Identifies leadership skills essential to the practice of nursing	Recognizes the role of the midwife as leader	Assumes the role of team member or leader based on the situation

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### Teaching/Learning Strategies:

- Lecture
- Classroom presentations, Case Presentations
- Group exercises, Educational games
- Demonstration and return demonstrations
- Coaching
- Homework and laboratory assignments
- Clinical practicum – well-child clinics; schools, recreation centers;
- Reflective diary

### Teaching Materials:

- Blackboards/flipcharts/projector
- Notes/handouts

### Course Expectations:

- Regularly attend classroom, clinical and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class, clinical and laboratory
- Complete all assignments and examinations on due dates

### Required Resources:

AMREF, Child Health.

IMCI Integrated Management of Childhood Illness, Geneva, World Health Organization, 2005.

## **Semester IV**

Maternal and Child Health Nursing: Care of the Childbearing and Childrearing Family,  
Adele Pillitteri, 2010.

Road to Health Chart

### **Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# **Semester V | Course Outline**

**Midwifery IV (Gynecology)**

**Pediatrics II**

**Introduction to Research**

**Administration (Leadership & Management)**

**Simplified Diagnosis and Treatment**





# Course Title: Midwifery IV – Gynecology

**Credits:**

4

**Placement:**

First semester of third year

**Duration:**

16 weeks (14 theoretical and 2 weeks for exam)

56 hours classroom and Simulation center

140 hours clinical

**Pre-requisites:**

Basic Math, Basic English, Fundamentals of Midwifery, Anatomy and Physiology I and II, Integrated Basic Sciences, Psychology and Sociology, Basic Nutrition, Ethical And Professional Adjustment, Health Assessment, Midwifery I, Midwifery II, Midwifery III, Epidemiology Demographics, Tropical and Communicable Diseases, Pharmacology and Drug Calculations, Medical Care, Pediatrics, Surgical Care, Teaching in Midwifery, Primary Health Concepts

**Course Description:**

This course will exposed the learner to the knowledge, skills and attitudes of gynecological issues in women's reproductive health, including topics, such as, basic principles of gynecologic care focusing on; menstruation, conception and infertility in cultural perspectives; reproductive tract infections and their consequences; cervical cancer, female circumcision/female genital mutilation (FGM); the differential diagnosis of the pelvic mass; fistula, women and malnutrition; urinary incontinence and pelvic organ prolapse; menopause and the status of women as well as clinical management of sexual gender base violence/rape.

**Broad Objectives:**

At the end of this course the student will be able to:

- Recognize and appropriately manage, including referral of, women with acute and chronic gynecological conditions
- Understand the social, economic, cultural impact of gynecological problems in developing countries, especially as it relates gender issues in reproductive health/ women's health
- Apply the appropriate knowledge, skills and attitude in addressing harmful traditional practices, especially female circumcision/ FGM
- Appropriately manage selected gynecological problems and changes, especially due to age, of the reproductive system

## Semester V

### Specific Objectives:

At the end of the course the student will be able to:

- Describe clinical gynecology and common problems related to this specialty
- Discuss the social, economic, cultural, and biological implications of gynecologic problems, with special emphasis on the impact of gender differences on women's health.
- Describe the physiology and pathophysiology of the menstrual cycle, the role of culture in generating menstrual complaints, and the implications of this interaction for women in developing countries.
- Describe the nature and impact of reproductive tract infections on women's health in developing countries.
- Describe the pathophysiology of infertility and its impact on women's live in developing countries.
- Discuss the problem of cervical cancer in the developing world.
- Discuss the implications of mass lesions of the pelvis for women's health in developing countries.
- Describe the practice of female circumcision ("female genital mutilation") in its local social context, as well as to explore the implications that these practices have for women's health.
- Define the intertwined problems of pelvic organ prolapse and urinary incontinence in the setting of developing countries.
- Identify major reproductive health due to age (adolescent and aged health problems).
- Recognize the clinical manifestations of selected gynecological diseases and disorders
- Perform a physical examination, including clinical breast examination and take a comprehensive reproductive health history focused on the women with gynecological issues
- Describe current options for diagnosis, treatment for system-specific manifestations of selected systemic disorders, management and therapy including the efficacy, doses, and interactions of individual drugs in gynecology, and women's health
- Demonstrate ability to prepare and assist with the diagnostic tests of clients with sexual and reproductive health problems.
- Demonstrate ability to manage pharmacologic agents used in the treatment of sexual and reproductive health problems.

- Describe the impact of nutritional issues on women's health in developing countries.
- Discuss the education of patients regarding screening and prevention of gynecological problems
- Discuss the clinical management of rape and other problems of violence against women.
- Describe how to manage care of survivors, including examination, take history, collecting forensic evidence and perform the physical and genital examination.
- Describes the different treatments to be prescribed and follow-up care of the survivor.

**Course Content:**

**Unit I | Overview of Gynecology**

**1. DESCRIPTION**

**2. APPLICATION OF REPRODUCTIVE ANATOMY AND PHYSIOLOGY AS IT RELATES TO GYNECOLOGY:**

- Reproductive anatomy
- The reproductive cycle
- Breasts
- Hormones
- Cardiovascular system
- Musculoskeletal system
- Urinary system

**Unit II | Midwifery Care of the Well Woman**

**1. BREAST HEALTH**

**2. CERVICAL CANCER SCREENING:**

- Visual Inspection With Acetic Acid (Via)
- Pap Test
- Colposcopy

## Semester V

### 3. EXERCISE

### 4. NUTRITION

### 5. SEXUALITY

### 6. CUSTOMS AND TRADITIONS AFFECTING THE HEALTH OF WOMEN AND GIRLS:

- Female circumcision/Female genital mutilation (FGM)
- Religious beliefs
- Cultural practices
- Tribes and taboos
- Ethnicity in Liberia

## Unit III | Midwifery Care to Women with Selected Gynecological Problems

### 1. SOME COMMON SEXUAL AND REPRODUCTIVE HEALTH PROBLEMS AND CONDITIONS:

- Sexually transmitted disease
- Abortions
- Menstrual disorders
- Pelvic inflammatory diseases
- Breast, uterus and cervical cancer
- Abnormal genital bleeding
- Genital ulcers
- Urinary tract infections
- Urinary incontinence
- Disorders of menstruation
- Vaginitis
- Etiology of sexual and reproductive health conditions
- Assessment of clients with sexual and reproductive health problems

- Patho-physiological processes and management of Sexual and Transmissible Infections (STI) problems and conditions
- Diagnostic tests of sexual and reproductive health conditions
- Pharmacologic agents used in the treatment of sexual and reproductive health problems and conditions
- Identification and Treatment or Referral
- Prevention and management of infertility and sexual dysfunction in both men and women
- The problem of infertility:
  - Definition:
    - Female
    - Male
    - Causes
    - Pathophysiology
    - Management
- Sexual dysfunction:
  - Description
  - Causes
  - Management
- Prevention and management of complications of abortion – Post abortion care:
  - Complications
  - Post abortion care:
    - Manual Vacuum Aspirator (MVA)
    - Antibiotic therapy
    - Family planning counseling and services
    - Safe abortion

## **Unit IV | Climacteric/Menopause**

- The End of the Reproductive Period

## Semester V

### **Unit V | Conditions Affecting the Pelvic Musculature and Vaginal Wall**

- Rectocele
- Cystocele
- Uterine Prolapsed
- Fistula
- Masses And Lesions

### **Unit VI | Conditions Affecting the Cervix and Uterus**

#### **1. CERVICITIS**

#### **2. ENDOMETRITIS**

#### **3. UTERINE DISPLACEMENT**

#### **4. TUMORS:**

- Types:
  - Malignancies:
    - Endometrial
    - Cervical Carcinoma
  - Benign Tumors:
    - Uterine Fibromas

### **Unit VII | Conditions Affecting the Ovaries and Fallopian Tubes**

- Salpingitis
- Ectopic Pregnancy
- Cysts And Tumors

### **Unit VIII | Congenital Abnormalities**

- Imperforate Hymen
- Cysts
- Tumors

## **Unit IX | Conditions Affecting the Breasts**

- Infections
- Mastitis
- Lumps
- Tumors
- Early Detection And Prevention Of Cancer
- Breast Examination Techniques
- Clear Or Bloody Discharge From Nipples

## **Unit X | Other Problems Affecting Women's Health**

- Dysmenorrhea
- Menorrhagia
- Metrorrhagia
- Amenorrhea
- Endometrial Carcinoma
- Cervical Carcinoma
- Breast Cancer

## **Unit XI | Referral System for Gynecological Problems**

## **Unit XII | Sexual Gender Based Violence**

### **1. DEFINITION**

### **2. TYPES OF SEXUAL VIOLENCE:**

- Rape and marital rape
- Child sexual abuse, defilement and incest
- Forced sodomy/anal rape
- Attempted rape or attempted forced Sodom/anal rape

## Semester V

- Sexual abuse (ex. inappropriate touching)

### 3. CONSEQUENCES OF SGBV ON REPRODUCTIVE HEALTH:

- Miscarriage
- Unwanted pregnancy
- Unsafe abortion
- STIs, including HIV/AIDS
- Menstruation disorders
- Pregnancy complication
- Gynecological disorders
- Sexual disorders

### 4. CLINICAL MANAGEMENT OF RAPE IN SGBV SURVIVORS:

#### *Eight Steps in the management of rape in SGBV survivors*

- Step 1. Preparing to offer medical care to SGBV survivor:
  - Information to the community:
    - What services are available for people who have been raped
    - What are the benefits for seeking medical care?
    - Where to go for services, preferable 24 hours a day service.
    - The importance of coming immediately or as soon as possible (ASAP) after an incident without bathing or changing clothes.
    - They can trust the service to treat them with dignity, maintain their security, and respect their privacy and confidentiality.
    - The country's law and policies:
      - Which health care provider should provide what type of care?
      - What are the legal requirements with regards to forensic evidence?
      - What are the legal requirements with regard to reporting?
      - What are the national laws regarding management of the possible medical consequences of rape (emergency contraception, abortion, testing and prevention of HIV infection, etc.).
  - Resources and capacities available:
    - What laboratory facilities are available for forensic testing: DNA, STI, and HIV?



- What counseling services are available?
- Are there rape management protocols and equipment for documenting and collection of forensic evidence?
- Is there a national STI treatment protocol, a post exposure prophylaxis (PEP) protocol and a vaccination schedule? Which vaccines are available? Is emergency contraception available?
- What possibilities are there for referral, counseling services, surgery, pediatrics or OB-Gyn services?
- Where should care be provided and by whom:
  - Clinic or OPD services already providing reproductive health services e.g.: family planning, antenatal care service, normal delivery care service, and management of STI and referral services.
  - Staff in health facilities dealing with rape survivors, from receptionists' staff to health care professionals, should be trained in their care. The training should be adapted accordingly.
- How should care be provided?
  - According to developed protocol
  - In comprehensive, confidential and non-judgment manner
  - With focus on the survivor and her needs
  - With an understanding of the provider's own attitudes and sensitive
- What is needed?
  - All health care for survivors should be provided in one place to avoid many movements by the patient from place to place
  - Services should be available, supplies should be prepared and kept in a special box for speedy readiness including:
    - Protocol
    - Furniture
    - Medical supplies
    - Drugs
    - Administrative supplies
- Step 2. Preparation of the survivor for examination:
  - Informed consent
  - Be compassionate
  - Be holistic

## Semester V

- The preparation is done as follows:
  - Introduce yourself
  - Ensure that a support person or trained health worker of the same sex accompanies the survivor through the examination
  - Explain what is going to happen during each step of the examination
  - Reassure her that she is in control of the pace, timing and components of the examination
  - Reassure her that findings will be kept confidential unless she decides to bring changes and ask her if she has any questions
  - Ask if she wants to have a specific person present for support. Ask this question when she is alone
  - Review the consent form with survivor and make sure she understands everything in it
  - Explain to her that she can refuse any aspect of the examination she does not wish to undergo. Once the consent is well understood, ask her to sign it. If she cannot write, obtain a thumbprint with the signature of a witness.
  - Limit the number of people in the examination room
  - Do the examination ASAP
  - Do not force or pressure the survivor to do anything against her will
- Step 3. Taking the history:
  - General guidelines as follows:
    - If the interview is conducted in the treatment room, cover the medical instruments until they are needed.
    - Before taking the history, review any documents or paperwork brought by the survivor to the health centre
    - Use a calm tone of voice and maintain eye contact
    - Let the survivor tell her story the way she wants to
    - Questioning should be done gently and at the survivor's own pace; avoid questions that suggest blame, such as "what were you doing there alone?"
    - Take sufficient time to collect all needed information, without rushing.
    - Do not ask question that have already been asked and documented by other people involved in the case
    - Avoid any distraction or interruption during the history taking
    - Explain what you are going to do at every step

- Filling of medical history and examination form for sexual violence:
  - Take first general information:
    - Ask the survivor to describe what happened.
    - Explain that she does not have to tell you anything she does not feel comfortable with.
    - Explain to the survivor, and reassure her of confidentiality if she is reluctant to give detailed information but explain that it is important that the health worker understands exactly what happened in order to check for possible injuries and assess the risk of pregnancy and STI or HIV.
    - If the incident occurred recently, determine whether the survivor has bathed, urinated, defecated, vomited, used a vaginal douche or changed her clothes since the incident. This may affect what forensic evidence can be collected.
- Get information on existing health problems:
  - Allergies
  - Use of medication
  - Vaccination
  - HIV status
  - Evaluate for possible pregnancy
  - Use the checklist to check for pre-existing pregnancy if no pregnancy test:
    - Have you given birth in the past four weeks?
    - Are you less than 6 month postpartum and fully breastfeeding; and free from menstrual period start within the past 7 days?
    - Have you gone without sexual intercourse since your last menstrual period (apart from the incident)?
    - Did your last menstrual period start within the past 10 days?
    - Have you had a miscarriage or abortion in the past 10 days?
    - Have you been using a reliable contraceptive method consistently and correctly?
    - If the survivor answers NO to all the six questions, they should ask about and look for signs and symptoms of pregnancy. If pregnancy cannot be confirmed, provide the survivor with information on emergency contraception to help her arrive at an informed choice.
    - If the survivor answers YES to at least one question and she is free of signs and symptoms of pregnancy, provide her with information on emergency contraception to help her arrived at an informed choice.

## Semester V

- Step 4. Collecting forensic evidence:
  - Reasons for collecting evidence:
    - To prove or disprove a connection between individuals and/or between individual and objects or places
    - To support a survivors story
    - To confirm recent sexual contact
    - To show that force or coercion was used
    - Possibly, to identify the attacker
    - To help survivor in pursuing legal redress
  - General Rules/Principles:
    - Obtain a voluntary informed consent for examination and to obtain the required sample for forensic examination.
    - Prepare equipment and supplies for forensic examination
    - Look at the survivor first, before you touch her and note her appearance and mental state.
    - Always inform her on what you are going to do and get her permission. Evidence should only be released to authorities if the survivor decides to proceed with the case.
    - Permit her to ask questions and assure her that she is in control
    - Do the survivor’s vital signs (temp. BP, pulse and respiratory rate)
    - Treat and attend urgently to any medical complications expressed by the patient.
    - Collection of sample such as blood, saliva, and sperm within 72 hours of the incident may help to support the survivor’s story
  - Documenting the case:
    - Before 72 hours: samples collected are blood, hair, saliva, and clothing. These will help support survivor’s story.
    - After 72 hours: the amount and type of evidence(s) collected will depend on the situation. Rest mostly on history because all forensic evidence has been destroyed.
  - Information to Document:
    - Record victim’s important statement in her own word clearly, completely, objectively, and non-judgmentally.
    - Avoid words like “alleged”
    - Use qualifying statements like “patient reports” or “patient said” or “patient states”.

- Note down clearly and systematically using standard terminology which sample(s) was/were collected
- Record the assailant's name, if known
- Consult your local laboratory regarding appropriate types and handling of specimens
- Record your findings in the pictogram
- Record the interview and the findings in clear, complete, objective, non-judgmental way.
- It is not the health care provider's responsibility to determine whether or not a woman has been raped.
- Document your findings without stating conclusions about the rape. Note that in many cases of rape there are no clinical findings.
- Completely assess and document the physical and emotional state of the survivor.
- Document all injuries clearly and systematically using standard terminology.
- Report precisely, in the survivor's own words, important statements made by her, such as reports of threats made by her, such as reports of threats made by the assailant. Do not be afraid to include:
  - Name of the assailant
- Use qualifying statements such as "patient states" or "patient reports"
- Avoid the use of the term "Alleged" as this can be interpreted as meaning that the survivor exaggerated.
- Make note of any sample collected as evidence
- Sample that can be collected as evidence:
  - Injury evidence: physical or genital
  - Clothing: torn or stained
  - Foreign material: soil, leaves, and grass on clothes or body or in hair
  - Hair: foreign hair on pubis, clothes or body
  - Sperm and seminal fluid: from vagina, anus, and oral cavity for prostate acid phosphates analysis
  - DNA analysis
  - Blood or urine for toxicology testing
  - Method of collecting forensic samples
  - Use the following principles and adhere to them strictly:
    - Avoid contamination
    - Collect early

## Semester V

- Handle appropriately
- Label accurately
- Ensure security
- Maintain continuity
- Document collection
- Types of samples that can be collected as evidences:
  - Injury evidences: physical and/or genital trauma can be evidence of forces and should be document
  - Foreign materials (soil, leaves, hair, and grass) on clothes or body may ascertain the survivor’s story.
  - Hair: foreign hair may be found on the survivor’s clothes or body, head and pubic hair from the survivor may be plated or cut for comparison.
  - Sperm and seminal fluid-swabs may be taken from her vagina, anus or oral cavity, if penetration took place in these locations for direct examination for sperm, and for DNA and acid phosphates
  - Bite marks, semen stains and involved orifices and finger nail cuttings and scrapings can be taken for analysis.
  - Blood from the victim can be taken for analysis to distinguish it from any foreign DNA found.
  - Blood or urine may be collected for toxicology testing (if the survivor was drugged).
  - Inspection of the blood to collect all evidence
  - Examine the survivor’s clothes. Examine the upper half of her body first, then the lower half, or provide a gown for her to cover herself
  - Document all injuries
  - Collect samples for DNA
  - The survivor’s pubic hair may be combed for foreign hairs
  - If ejaculation took place in the mouth, take samples and swab the oral cavity, for direct examination of sperm and for DNA analysis if recommended
  - Inspection of the anus, perineum and vulva:
    - Inspect and collect sample for DNA analysis from the skin around the anus, perineum and vulva using cotton-tipped swabs moistened with sterile water.
- Examination of the vagina and rectum:
  - Depending on the site of penetration, examine the vagina and/or rectum.
  - Lubricate a speculum with normal saline or clean water (other lubricants may interfere with forensic analysis).

- Collect some of the fluid in the posterior fornix for examination for sperm.
- Take specimens of the posterior fornix and the endocervical canal for DNA analysis, using cotton-tipped swabs. Let them dry at room temperature.
- Collect separate samples from the cervix and the vagina. These can be analyzed for acid phosphatase.
- Obtain samples from the rectum, if indicated, for examination for sperm, and for DNA and acid phosphatase analysis.
- Maintaining the chain of evidence:
  - Maintain the chain of evidence at all time to ensure that the evidence will be admissible in court
  - Collect, label, store and transport evidence properly
  - Everyone who has possession of the evidence at any time, from the individual who collect it to the one who takes it to the courtroom, must include their signatures, to prevent any possibility of tampering
  - Take the following precautions if it is not possible to take the samples immediately for a laboratory:
    - Dry all cloth, swabs, gauze and other objects to be analyzed at room temperature and pack them in paper (not plastic) bags.
    - Store blood and urine in the refrigerator for 5 days. To keep the samples longer they need to be stored in a freezer.
    - Label clearly all samples with a confidential identifying code (not the name or initials of survivor), date, time and type of sample (what it is, from where it was taken), and put in a container or a bag.
    - Seal the bag or container with paper tape and write the identifying code and the date and signature your initials across the tape.
- Diagnostic Test:
  - Depends:
    - On the nature of the assault
    - The severity of the injuries sustained
    - On a case by case basis
- Prepare medical Certificate:
  - Medical certificate is a legal requirement in most countries
  - Healthcare provider has the responsibility to prepare it
  - It is a confidential medical document given to a survivor by healthcare providers
  - Constitutes an element of proof; Depending on the setting, the survivor may use it for 20 years; prove the event to seek justice or compensation

## Semester V

- Healthcare providers should file one copy in order to certify the authenticity of the document supplied by the survivor before a court, if requested
- Survivor has the singular right to decide whether and when to use this document
- Certificate may be handed over to legal services or organization with a protection mandate by a government of the survivor
- Reporting medical finding in a court of law:
  - Only some rape cases go to court for actual trial
  - In court, the prosecutor must prove three things:
    - Some penetration however slightly of the vagina or anus by a penis or other objects or penetration of the mouth by a penis
    - That penetration occurred with the consent of the person
    - The identity of the perpetrator
    - The health provider is expected to give evidence as a factual witness and not as an expert witness
    - Meet the prosecutor prior to the court session to prepare your testimony and obtain significant issues involved in the case
- Healthcare provider shall:
  - Dress appropriately
  - Speak clearly and slowly and make eye contact with whoever you are speaking to
  - Use precise medical terminology
  - Answer question thoroughly and professionally as possible
  - If you don't know the answer to the question, "say so" don't testify about matters that are outside your area
  - Ask for clarification of questions that you don't understand. Do not try to guess the meaning of questions
  - Document information on the wound

Features	Notes
Classification	Use accepted terminology wherever possible (i.e. abrasion, contusion, laceration, incised wound and gun shot)
Site	Describe the anatomic position
Size	Measure the dimension of the wounds
Shape	Describe the shape of the wound (linear, curved, irregular)
Surroundings	Note the condition of the surrounding or nearby tissues (e.g. Bruised, swollen)
Color	Observation of Color particularly relevant when describing bruises
Contents	Note the presence of any foreign material in the wound (e.g. dirt, glass).



Features	Notes
Age	Comment on any evidence of healing
Borders	Describe the characteristic of the edges of the wound(s) which may provide a clue as to the weapon used.
Depth	Give an indication of the depth of the wounds

- The medical certificate:
  - This is legal requirement:
    - The examiner is to make sure that this is completed
    - It is confidential
    - It should be hand over to the survivor
    - The examiner should keep one copy locked away from the survivor's file in order to be able to certify the authenticity of the document supplied by the survivor before a court if requested
    - A medical certificate must include:
      - Name and signature of the examiner
      - Name of the survivor
      - Exact date and time of the examination
      - The survivor's narrative of the rape, in her own words
      - Findings of the clinical examination and the nature of samples taken
- Step 5. Performing the physical and genital examination:
  - The primary objective of the examination is to determine what medical care should be provided to the survivor.
  - General guidelines to be followed:
    - Make sure the equipment and supplies are prepared
    - Always look at the survivor first, before touching her, and note her appearance and mental state
    - Always tell her what you are going to do and ask her permission before you do it
    - Assure her that she is in control and that she can stop the examination at any time
    - Take the patient's vital signs

## Semester V

- The initial assessment may reveal severe medical complications that need to be treated urgently, and for which the patient will have to be admitted to hospital or you refer the survivor to a referral hospital. Such complication might be:
  - Extensive trauma (genital region, head, chest or abdomen)
  - Asymmetric swelling of joints (septic arthritis)
  - Neurological deficits
  - Respiratory distress
  - Obtain voluntary informed consent for the examination and to obtain the required sample for forensic examination
  - Survivor presents within 72 hours
- The procedure is as follow:
  - Physical examination Guidelines:
    - Never ask the survivor to undress or uncover completely. Examine the upper half of the body first then the lower half; or give her a gown to cover herself.
    - Minutely and systemically examine the patient's body. Start with vital signs and hands and wrists rather than the head, since this a more reassuring for the survivor.
    - Do not forget to look in the eyes, nose, and mouth and behind the ear, the neck. Examine forearms, wrists and ankles.
    - Take note of the pubertal stage
    - Look for all signs that are consistent with her story (e.g. bite, punch marks...)
    - Note all your findings carefully on the examination form and attached body pictogram, the exact location of all wounds, bruises, mark etc., her mental status and samples collected.
  - Examination Procedure:
    - Examination of genital area, anus and rectum:
      - Note that there is identifiable damage in less than 50%
      - Inspect in the following order: mons pubis, inside of the thighs, perineum, anus, labia majora and minora, clitoris, urethra, introitus and hymen
      - Note any scare from previous genital mutilation or childless birth
      - Look for genital injury such as bruises, scratches, abrasions, tears (often located on the posterior fourchette)
      - Look for any sign of infection: ulcers, discharge or warts

- Check for injuries to the introitus and hymen by holding the labia at the posterior edge between index finger and thumb and gently pulling outward and downward. Hymeneal tears are more common in children and adolescents
  - Take samples according to your local evidence collection protocol
  - If collecting samples for DNA analysis, take swabs from around the anus and the perineum before the vulva, in order to avoid contamination.
  - If there has been virginal penetration, gently insert a speculum, lubricated with water or normal saline (**DO NOT USE A SPECULUM IN CHILDREN**)
  - Under good light inspect the cervix, the posterior fornix and the virginal mucosa for trauma, bleeding and sign of infection.
  - Take swabs and collect vaginal secretions according to the location evidence collection protocol.
  - If indicated by the history and the rest of the examination, do a bimanual examination and palpate the cervix, uterus and adnexa, looking for signs of abdominal trauma, pregnancy or infection.
- Examination of anus and rectum:
    - Note patient position during examination, (supine, prone, knee-chest or lateral recumbent for anal examination and supine for genital examination)
    - Note the shape, dilatation of the anus, fissures, presence of fecal matter on the anal skin, and possible rectal bleeding from rectal tears.
    - If indicated, do a recto-virginal examination and inspect the rectal area for trauma, recto-virginal tears or fistulas, bleeding and discharge.
    - Note the sphincter tone. If there is bleeding, pain or suspected presence of a foreign object, refer the patient to a hospital.
  - Special considerations for elderly women:
    - Elderly women who have been virginally raped are at increased risk for virginal tears and injuries, and transmission of STI and HIV.
    - Decreased hormonal levels following the menopause result in reduced vaginal lubrication and a thinner and a more friable vaginal wall.
    - Use a thin speculum for vaginal examination.
    - If the only reason for the examination is to collect evidence or to screen for STIs, consider inserting swabs only rather than using a speculum.
  - Special considerations for men:
    - For the genital examination:
      - Examine the scrotum, testis, and penis, per urethral tissue, urethral meatus and anus.
      - Note if the survivor has been circumcised.

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- Look for hyperemia, swelling (distinguish between inguinal hernia, hydrocele and hematocele), torsion of the testis, bruising, anal tears, etc.
- Torsion of the testis is an emergency and requires immediate surgical referral.
- If urine contains large amounts of blood, check for penile and urethral trauma.
- If indicated, do a rectal examination and check the rectum and the prostate for trauma and signs of infection.
- If relevant, collect material from the anus for direct examination for sperm under a microscope.
- Laboratory testing:
  - Only sample mentioned in step 4 needs to be collected for laboratory testing. If indicated by the history of the findings on examination, further samples may be collected for medical purposes.
  - If the survivor has complaints that indicate urinary tract infection, collect a urine sample to test for erythrocytes and leucocytes, and for possible culture.
  - Do pregnancy test if indicated and if available.
  - Other diagnostic tests, such as X-ray and ultrasound examinations, may be useful in diagnosing fractures and abdominal trauma.
- Survivor Presents more than 72 hours:
  - Physical examination:
    - It is rare to find any physical evidence more than one week after an assault
    - Do a full physical examination as above
    - Note the size and color of any bruises and scars
    - Note any evidence of possible complication of rape
    - Check for signs of pregnancy
    - Note the survivor's mental state (normal, withdrawn, depressed, and suicidal).
  - Examination of the genital area:
    - If the incident is less than a week, note any healing injury and/or recent scars.
    - If more than a week and there are no bruises or lacerations and no complaint (e.g., vaginal or anal discharge or ulcer) there is little indication to do pelvic examination.

- In this case a careful inspection with subsequent reassurance that no physical harm has been done may be of a great relief and benefit for the survivor.
- Laboratory testing:
  - Do a pregnancy test if indicated and available
  - If laboratory facilities are available, collect samples from the vagina and anus for STIs.
- Screening might cover:
  - Rapid plasma regain (RPR) test for syphilis
  - Gram stain and culture for gonorrhea
  - Culture or enzyme-linked immunosorbent assay (ELISA) for Chlamydia
  - Wet mounts for trichomonas
  - HIV test (only on a voluntary basis and after counseling)
- Special considerations for children:
  - Health workers must consider:
    - Child development and growth
    - Normal child anatomy
    - Techniques in examining children who have been abuse
    - National child abuse management protocol and information on customary police and court procedure
    - Specific laws about who give consent for minors and who can go to court as an expert witness.
- Health workers must know when caring for child survivors:
  - A parent or legal guardian should sign the consent form unless he or she is the suspected offender:
    - In this case, a representative from the police, the community support services or the court may sign the form
    - Adolescent minors may be able to give consent
    - The child should never be examined against his or her will, whatever the age, unless the examination is necessary for medical care
    - If initial assessment reveals severe complications, survivor must be admitted.
    - Such complications include:
      - Convulsions
      - Persistent vomiting

## Semester V

- Stridor in a calm child
  - Inability to drink or breast-feed
  - In children younger than three months, look also for
  - Fever
  - Low body temperature
  - Bulging fontanel
  - Grunting, chest in drawing, breathing rate more than 60 breaths/minute
- Take the history:
    - Use of interpersonal communication skills to create a trusting relationship and a safe environment for the child.
    - The procedure is as follows:
      - Take special care in determining who is present during the interview and examination (family member could be the perpetrator)
      - Introduce yourself to the child and address the child by her (his) name.
      - Sit at every level and maintain eye contact
      - Assure the child that he or she is not in any trouble
      - Ask a few questions about neutral topics, e.g., school, friends, who the child lives with and the favorite activities
      - Begin the interview by asking open-ended questions, such as “why are you here today?” or “what were you told about coming here?”
      - Avoid asking leading or suggestive questions.
      - Assure the child it is okay to respond to any question with “I do not know”
      - Be patient: go at the child’s pace: do not interrupt his or her trend of thought
      - Ask open-ended question to get information about the incident. Ask yes – no question only for clarification of details.
      - For girls, depending on age, ask the menstrual and obstetric history
      - The pattern of sexual abuse of child is generally different from that of adults. For example, there is often repeated abuse. To get a clearer picture of what happened, the health care provider should try to obtain information on:
        - The home situation (Has the child a secure place to go to?)
        - How the rape/abuse was discovered
        - Who did it, and whether he or she is still a threat
        - If this has happened before, how many times and the date of the last incident

- Whether there have been any physical complaints (e.g. bleeding, dysuria, discharge, difficulty in walking, etc.)
- Whether any siblings are at risk
- Preparing the child for and conduct the examination:
  - The procedure for preparing the child for and conducting the examination is as follows:
    - There should be a support person or trained health worker whom the child trusts in the examination room
    - Encourage the child to ask questions about anything he or she is concerned about or does not understand at any time of the examination.
    - Explain what was happen during the children will be able to relax and participate in the examination.
    - It is possible that the child cannot relax because he or she has pains. If this is the case, give paracetamol or other simple analgesics, and wait for them to take effect.
    - Never restrain or force a frightened, resistant child to complete an examination. Restrain and force are often part of sexual abuse and, if used by those attempting to help, will increase the child's fear and anxiety and worsen the psychological impact of the abuse.
    - It is useful to have a doll on hand to demonstrate procedures and positions.
    - Show the children the equipment and supplies, such as gloves, swabs etc.
    - Allow the child to use these on the doll
    - Conduct the examination in the same order as for an adult. Special considerations for children are as follows:
      - Note the child's weight, height and pubertal stage. Ask girls whether they have started menstruating. If so, they may be at risk of pregnancy.
      - Small children can be examined on the mother's lap. Older children should be offered the choice of sitting on the chair or mother's lap, or lying on the bed.
      - Check the hymen as previously stated.
      - The amount of hymeneal tissue and the size of the vaginal orifice are not sensitive indicators of penetration. Note the location of any fresh or healed tears in the human and vaginal mucosa.
      - Do not carry out any digital examination (i.e. inserting fingers in the vagina orifice to assess its size)
      - Do not use a speculum to examine pubertal girls; it is extremely painful and may cause serious injury.

## Semester V

- S speculum may be used only when you suspect a penetrating vaginal injury and internal bleeding. In this case, a speculum examination of a prepubertal child is usually done under general anesthesia. Depending on the setting, the child may need to be referred to higher level of health care.
  - In boys, check for injuries to the frenulum of the prepuce, for anal and urethral discharge; take swabs if indicated.
  - All children, boys and girls, should have anal examination. Examine the anus with child in the supine or lateral position. Avoid the knee – chest position, as assailants often use it.
  - Record the position of any anal fissures or tears on the pictogram.
  - Reflex anal dilatation (opening of the anus on lateral traction on the buttock) can be indicative of anal penetration, but also of constipation
  - Do not carry out a digital examination to assess anal sphincter tone
- Laboratory testing:
    - Testing for STIs, should be done on case-by case basis and is strongly indicated in the following situations:
      - Child presents with signs or symptoms of STI
      - The suspected offender is known to have an STI or is at high risk of STI
      - There is a high prevalence of STI in the community
      - The child or parent requests testing
      - Screening for gonorrhoea, Chlamydia, syphilis and HIV must be done in all children who may have been raped
- Step 6. Treatment and Follow-Up Care:
    - General information:
      - Exposure to sexual violence is associated with a range of health consequences for the victim.
      - Comprehensive care must address the following issues, physical injuries, pregnancy; STIs, HIV and hepatitis B; counseling and social support; and follow-up consultation:
        - The possibility of pregnancy resulting from the assault should be discussed. If sexual violence results in pregnancy that a woman wishes to terminate, referral to legal abortion services should be made. When appropriate, patient should be offered testing for Chlamydia, gonorrhoea, trichomoniasis, syphilis, HIV and hepatitis B; this may vary according to existing protocol.
        - Health workers must discuss thoroughly the risks and the benefits of HIV post-exposure prophylaxis



- Social support and counseling are important for recovering. All patients should be offered access to follow-up services, including a medical review at 2 weeks, 3 months and 6 months post assault, and the referral for counseling and support services.
- The treatment and follow-up depend on how soon after the incident the survivor presents: Within and after 72 hours:
  - Survivor Presents within 72 Hours:
    - Prevent STIs
    - Prevent HIV Transmission
    - Prevent pregnancy
    - Provide wound care
    - Prevent tetanus
    - Prevent hepatitis B
    - Provide mental health care
    - Prevention of STIs:
      - Survivors of rape should be given antibiotics to treat gonorrhoea, Chlamydia, syphilis and for trichomonas if necessary
      - Give the shortest courses available in the protocol e.g. 400mg of cefixime plus 1g of azithromycin orally will be enough for gonorrhoea, Chlamydia and syphilis infections
      - Be aware that pregnant women should not take certain antibiotics and modify the treatment
      - Preventive STI regimens can start on the same day. See local protocols.
      - Use local protocol from MOHSW.
    - Prevention of HIV transmission:
      - Make sure that the staff is aware of PEP indications and how to counsel survivors on this issue or make names and addresses of providers for referral
      - Post exposure prophylaxis (PEP) is believed, if started within 72 hours after the incident to be beneficial.
      - PEP should be offered according to assessment of risk, which should be based on what happened during the attack
    - PEP (For example: Whether there was penetration, the number of attackers, injuries sustained, etc. Risk of HIV transmission increases in the following cases):
      - When there was more than one assailant
      - If the survivor has torn or damaged skin

## Semester V

- If the assault was an anal assault
  - If the assailant is known HIV positive or an injecting drug user
  - If the HIV status of the assailant is not known, assume they are HIV positive particularly in countries with high prevalence
  - PEP usually consists of 2 or 3 antiretroviral drugs (ARV) given for 28 days
  - If it is not possible for the survivor to receive PEP in your setting, refer her ASAP with 72 hours
- If she presents after 72 hours, provide information on voluntary counseling and testing (VCT) services
  - PEP can start on the same day as other emergency regimens
  - Counseling for HIV test may be particularly difficult with a person who has just gone through a sexual assault. The survivor may not be ready for additional stress of HIV testing and receiving the result.
  - If the survivor does not want to be tested immediately, PEP can be started and HIV testing can be addressed again at one week follow up visit
  - Pregnancy is not a contraindication to PEP, and ensure that pregnant women are referred for ANC
  - The following points should be covered when counseling for PEP:
    - The level of risk of HIV transmission during rape is not exactly known, but the risk exists
  - Settings where HIV prevalence is high:
    - It is preferable to know the survivor's HIV status prior to starting PEP
    - The survivor is free to choose or not to have immediate HIV testing. If she prefers, the decision can be delayed one week follow up visit.
  - The efficacy of PEP is not known but research on prevention of mother to child transmission and prophylaxis indicates that PEP is likely to be effective in reducing transmission:
    - Explain the common side effects of the drugs
    - Provide the survivor with a patient information leaflet
    - Survivor may be given a week's supply of PEP at the first visit with the remainder of drugs given at the one week follow up visit
  - Common side effects:
    - Tiredness, nausea, for zidovudine and lamivudine then vomiting, diarrhea, loss of appetite, stomach pain, headache, rash, kidney stone, muscle pains, general malaise, fever, jaundice, raised blood sugar and hemolytic anemia for Indinavir

- Prevention of pregnancy:
  - Taking emergency contraceptive pills (ECPs) within 5 days of unprotected intercourse will reduce the chance of pregnancy between 56 and 93% depending on the regimen and the timing
  - ECP does not interrupt or damage an established pregnancy
  - The use of ECP is a personal choice that can only be made by the survivor if the survivor is a child who has reached menarche, discuss emergency contraception with her and her parent or guardian who can help her to understand. If an early pregnancy is detected at this stage, make clear to the woman that it cannot be the result of the rape. There is no known contraindication to ECPs
- Using IUD as emergency contraceptive:
  - If the survivor presents after 5 days following the incident, IUD insertion is an effective method of prevention.
  - A skill provider should counsel the patient and insert the IUD. Make sure to give STI treatment
  - The IUD may be removed at the time of the woman's next menstrual period or left in place for future contraception.
- Instructions and Information for patients' prescribed ECPs:
  - The risk of becoming pregnant as a result of the assault will decrease if ECPs are taken within 5 days of the assault
  - ECPs are not 100% effective
  - ECPs do not cause abortion, they prevent or delay ovulation, block fertilization or interfere with implantation, they will not affect an existing pregnancy
  - Take pills as directed
  - The pills may cause nausea and vomiting. If vomiting occurs within one hour of taking the ECPs, repeat the same dose regimen
  - In most cases, the patient's next menstrual period will occur around the expected time or earlier. If it is delayed, a pregnancy test should be performed to assess the possibility of pregnancy. ECPs do not cause immediate menstruation.
  - Finally, patients should be advised that if they experienced any of the following symptoms, they should seek help immediately:
    - Severe chest pain
    - Shortness of breath
    - Severe headaches
    - Blurred vision or loss of vision

## Semester V

- Severe pain in the calf of thigh
- Provide wound care:
  - Clean any tears, cuts and abrasions and remove dirt, feces, dead and damaged tissue
  - Decide if any wounds need suturing
  - Suture clean wounds within 24 hours. After this time they will have to heal by second intention
  - Do not suture very dirty wounds
  - If there are major contaminated wounds, consider giving appropriate antibiotics
- Prevent tetanus:
  - If there are breaks in skin or mucosa unless the survivor has been fully vaccinated against tetanus
  - If vaccine and immunoglobulin are given at the same time, use separate needles and syringes and at different sites.
  - Advise survivors to complete the vaccination schedule (second dose at 4 weeks and third dose at 6 month to 1 year)
- Prevent hepatitis B:
  - Find out the prevalence of hepatitis B in your setting as well as the vaccination schedules
  - Check for the dosage and vaccination schedule for the product that is available in your setting
  - Check for the dosage and vaccination schedule for the product that is available in your setting
  - The provision of post exposure prophylaxis will depend on the setting you are working in
  - Survivor of rape should receive the vaccine within 14 days of the incident
  - In countries where the infant immunization program routinely include the vaccine and the vaccination card, if the survivor confirms this, no additional doses of the vaccine is needed
  - The usual vaccination schedule is 0, 1 and 6 months
  - Give the vaccine IM in the deltoid muscle in adults or the anterolateral thigh for infants and children
  - The vaccine is safe for pregnant women and people who have chronic or previous hepatitis B virus infection
- Provide mental health care

- Give social and psychological support
- If the survivor has symptoms of panic or anxiety that cannot be medically explained (without an organic cause) reassure him or her
- Provide medication only in exceptional cases: 5 to 10 mg diazepam to be taken at bedtime just for 3 days and refer to a professional trained in mental health
- If no such professional is available and the symptoms continue, repeat the dose for few days with daily assessment
- Be cautious not to create dependency
- Survivor Presents after 72 hours
- If laboratory tests for STIs reveal infection or the person has symptoms, follow local protocol for treatment
- HIV testing can be done within 6 weeks after the rape but it is recommended to refer the person for voluntary counseling and testing (VCT) after 3 to 6 months
- If the survivor is pregnant, try to ascertain if she could have become pregnant before or as a result of the rape and counsel her on the possibilities available:
  - If she presents between 3 days and 5 days give emergency; contraceptive pills
  - If she presents within the 5 days, insertion of IUD is also an effective method of prevention
  - For tetanus, vaccinate immediately, no matter how long it is since the incident. If there remains major dirty, unhealed wounds, consider giving tetanus immunoglobulin. The incubation period is 3 to 21 days
  - Hepatitis B has an incubation period of 2 to 3 months on average. Vaccinate immediately no matter how long it has been. If vaccination card confirms previous vaccination: No additional dose is needed.
  - For physical injuries, treat or refer for treatment, all unhealed wounds:
    - Provide mental health as earlier stated
    - Provide counseling services.
- Step 7. Counseling the survivor:
  - Assessment to identify psychosocial and sexual complications stemming from SGBV
  - Manage according to protocols
- Step 8. Follow up Care of the survivors:
  - Follow up visits for survivors who did not receive post-exposure prophylaxis

## Semester V

- Two-week follow up visit:
  - Evaluate for STIs and treat
  - Assess pregnancy status if indicated
  - Test for syphilis if prophylaxis was not given
  - Provide advice on VCT for HIV
  - Evaluate mental and emotional status: refer or treat as needed
  - For those who started on post-exposure prophylaxis with anti-retroviral drugs, discuss the follow-up with the PEP Provider

# Midwifery IV

## **Clinical Course Description:**

This course is an introductory experience in the provision of comprehensive medical care and counseling services to the elderly, adult and adolescent female patients. Obstetrical conditions and gynecological problems commonly encountered will be the focus of this clinical experience.

## **Clinical Objectives:**

- Access the most current information on any aspect of obstetrics, gynecology, and women's health
- Recognize the clinical manifestations of a wide variety of diseases and disorders
- Describe current options for diagnosis, management and therapy, including the efficacy, doses, and interactions of individual drugs in all of obstetrics, gynecology, and women's health
- Evaluate and treat system-specific manifestations of systemic disorders
- Educate patients regarding screening and prevention

## **Clinical Placement:**

- Medical and Surgical Female Wards
- Out-patient department
- Community
- Antenatal clinics

## **Clinical Skills:**

- Educating patients regarding screening and prevention
- Assessing gyn patients using the midwifery process
- Documentation
- Making referrals

## Competencies

Knowledge	Attitude/Behavior	Skills
<p><b>The midwife has the knowledge and/or understanding of:</b></p> <ul style="list-style-type: none"> <li>– Growth and development related to sexuality, sexual development and sexual activity</li> <li>– Female and male anatomy and physiology related to conception and reproduction</li> <li>– Cultural norms and practices surrounding sexuality, sexual practices, marriage and childbearing</li> <li>– Principles of screening methods for cervical cancer, (e.g., visual inspection with acetic acid [VIA], Pap test, and colposcopy)</li> <li>– Principles of screening methods of the status the fetus</li> <li>– Principles of screening methods for pelvimetry</li> </ul>	<ul style="list-style-type: none"> <li>– Is responsible and accountable for clinical decisions and actions</li> <li>– Acts consistently in accordance with professional ethics, values and human rights</li> <li>– Acts consistently in accordance with standards of practice</li> <li>– Maintains/updates knowledge and skills, in order to remain current in practice</li> <li>– Acts consistently in accordance with standards of practice</li> <li>– Maintains/updates knowledge and skills, in order to remain current in practice</li> </ul>	<p><b>The midwife has the skill and/or ability to:</b></p> <ul style="list-style-type: none"> <li>– Take a comprehensive health and obstetric, gynecologic and reproductive health history</li> <li>– Engage the woman and her family in preconception counseling, based on the individual situation, needs and interests</li> <li>– Perform a physical examination, including clinical breast examination, focused on the presenting condition of the woman</li> <li>– Perform a physical examination, including clinical breast examination, focused on the presenting condition of the woman</li> <li>– Perform a physical examination to determine the gestational age, position/lie, presentation</li> <li>– Perform a physical examination to determine the different type of pelvis and pelvimetry</li> </ul>

## Teaching/Learning Strategies:

- Classroom presentations
- Case studies
- Role plays
- Lectures
- Group exercises
- Educational games
- Demonstration and return demonstration
- Coaching and feedback
- Homework and laboratory assignments



- Seminar Presentations

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Complete all clinical hours
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class, laboratory and clinical practicum
- Complete all assignments and examinations on due dates

**Required Resources:**

*Myles Textbook for Midwives*, 15th Ed., D. Fraser, M. Cooper, 2009.

*Contraceptive Technology*, 19th Ed., R. Hatcher, 2007.

Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs and World Health Organization, *Family Planning: A Global Handbook for Providers*, 2007.

*Midwifery Preparation and Practice*, S. Pairman, J. Pincombe, C. Thorogood, S. Trace, 2006.

*Varney's Midwifery*, 4th Ed., H. Varney, 2004. Draft Sexual and Reproductive Health Competencies, WHO, 2009.

*Family Planning Handbook: A Global Handbook for Providers*, WHO, 2008.

**Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Pediatrics II

**Credits:**

4

**Placement:**

First semester of third year

**Duration:**

16 Weeks (14 instructional and 2 exams)

56 classroom hours

168 hours

**Pre-requisites:**

Health Assessment, PHCI &II, Pharmacology, Fundamentals of Midwifery I & II, Midwifery I & II, Tropical/Communicable Diseases, Basic Sciences, Pediatrics I

**Course Description:**

This course is builds on Pediatric I and it is designed to provide students with the appropriated knowledge, skills and attitude to care for children, especially with acute and emergency illness. Student would apply principles of growth and development with knowledge of the care of healthy children learned in Pediatric I in care for sick child. Teaching and counseling families are integral to this course. Clinical practicum in acute care facilities and laboratory settings assists the student in integrating didactic content into providing safe and effective care to children and their families.

**Broad Objectives:**

At the end of this course, students will be able to:

- Obtain a broad overview of problems relative to pediatrics in developing countries – especially to Liberia
- Understand the roles and responsibilities of a care provider in the provision of care of the sick child
- Apply and demonstrate the concepts of Pediatric care
- Understand the importance of comprehensive Pediatrics care to a child taking into consideration their growth and developmental stages
- Integrate the concept of family centred care when caring for children, especially those related to areas such as genetic disorders, congenital malformations and long term care
- Apply knowledge of growth and development to the process of caring for children with acute and chronic illness

**Specific Objectives:**

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

- Demonstrate the use of pediatric assessments, interventions and evaluations in the care of sick children
- Explain differences and similarities in health care management of acutely ill and chronically ill children
- Explain the pathophysiology and pharmacology of the most common causes of death in young children
- Describe the five most common causes of death in children under five in developing countries worldwide
- Describe the WHO strategy of Integrated Management of Childhood and Neonatal Illnesses (IMNCI)
- Explain the purposes of the World Health Organization's Integrated Management of Childhood and Neonatal Illnesses (IMNCI)
- Explain the role of the provider in the implementation of the IMNCI
- Demonstrate in simulation or role play identification and use of appropriate case management charts from IMNCI
- Demonstrate how to assess for danger signs, classify childhood illnesses, identify specific treatments for children, teach family practical instructions and counsel regarding child nutrition and maternal health according to IMNCI Standards
- Demonstrate skills in providing care for children with special health care needs (CSHCN)
- Demonstrate selected/common procedures in providing care to sick children
- Describe etiology, signs and symptoms, pathophysiology, as well as, diagnostic and screen tools, pediatric care and treatment, including pharmacological measures for selected diseases, including diseases prevented by immunization

**Course Content:****Unit I | Principles of Management of Acutely Ill Child****1. CARE OF A HOSPITALISED CHILD:**

- Hospitalization of the child:
  - Stressors and reactions related to developmental stages, death and dying for ill/hospitalised child

## Semester V

- Family teaching and counseling
- Play activities for hospitalised child and safety precaution
- Principles and practices in the care of hospitalised child and family

### 2. COMMON PEDIATRICS PROCEDURES:

- Admission of the child
- Collection of blood and other lab tests
- Bathing a child
- Pre-operation preparation
- Collection of urine/inserting a Urinary Catheter
- Bed-making
- Special Feeding Techniques and Tube insertion and care:
  - Gavages and lavage:
    - Naso-gastric tube
    - Gastrostomy
- Analysis And Interpretation Of Laboratory Findings
- Administration of Medications for the pediatric patient
- General Principles
- Techniques for Safely Administering Common Pediatric Medications:
  - Oral Medications
  - Rectal
  - Nose, Ear And Eye Drops
  - Injections (S.C., I.M., I.V):
    - Site, procedure, restraint, technique
    - Scalp vein needle or small flexible cannulas for administering IVs
    - Preventing IV removal by the child
    - Oxygen Administration
    - Calculations of pediatric drug dosages

- Rules For Calculating Dosage:
  - By Weight
  - By Age
- Calculations of IV fluids
- Safe And Effective Drug Administration:
  - Checking Dosages
  - Identification Of Patient
  - Approach To Patients And Parents
  - Recording of Drug Administration

## **Unit II | Care for Sick Children: Conditions, Pathophysiology, Pharmacology, Management and Concerns**

### **1. CARE OF THE SICK UNDER FIVE CHILD:**

- Common causes of under-five mortality in Developing Countries/Liberia

### **2. INTEGRATED MANAGEMENT OF NEONATAL & CHILDHOOD ILLNESSES (IMNCI):**

- Objectives of IMNCI:
  - To reduce mortality and morbidity associated with the major causes of disease in children less than five years of age
  - To contribute to healthy growth and development of children
- IMNCI Strategy:
  - Addresses the most common childhood conditions
  - Introduced in 1995 (WHO & UNICEF) and currently adopted by over 100 countries
  - Recommended for all countries with IMR > 40/1000 live births
  - It encompasses both preventive and curative interventions & responds to the felt needs of the population
- Three components:
  - Health worker skills:
    - Case management guidelines and standards

## Semester V

- Training of facility-based public health providers
- IMNCI roles for private providers
- Maintenance of competence
- Among trained health workers
- Community:
  - Care seeking, nutrition
  - Home case management
  - Adherence to recommended treatment
  - Community involvement in health planning and monitoring
- Health system:
  - District planning and management
  - Availability of IMNCI drugs
  - Organization of work at health facilities
  - Quality improvement and supervision at health facilities
  - Referral pathways and services
  - HMIS
- IMNCI and health sector reforms:
  - Advantages of IMNCI:
    - Accurate identification of illness
    - Focuses on care of the child as a whole and not on the reason for the visit.
    - Ensures integrated management of all prevalent illnesses that the child may present.
    - Ensures the early identification and prompt referral of all seriously ill children
    - More appropriate & combined treatment
    - Promotes rational use of drugs
    - Attention to the health needs of the mother
    - Strengthening of preventive services
    - Includes actions to improve parental practices in caring for the child at home
  - Principles of IMNCI
- All sick children:
  - Must be examined for general danger signs

- Must be assessed for major symptoms and checked for immunization, nutritional assessment, feeding problems and other problems
- Limited signs are used
- Group of signs used for classifications than diagnosis for prompt action
- IMNCI address most problems
- Uses selected essential drugs
- Counseling is an essential component

### **3. IMNCI PROVISION OF CARE ACTIVITIES**

### **4. ASSESS & CLASSIFY THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS:**

- Main symptoms/illness:
  - Cough or difficult breathing-pneumonia
  - Diarrhea and dehydration
  - Fever- measles, Malaria
  - Ear problem
  - Malnutrition and anemia
  - Assessing mother's/caretaker's own problems

### **5. IDENTIFY AND TREAT THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS:**

- Activities:
  - Referral as needed
  - Pre-referral treatments
  - Give oral drugs including antibiotics, antimalarials, paracetamol, vitamin A, iron, folic acid and mebendazole)
  - Treat local infections

### **6. COUNCIL THE MOTHER/CARETAKER:**

- Child's immunization status
- Counsel the mother/caretaker about feeding problems and fluid intake
- When to return for follow-up visits
- When to return immediately for further care and immunizations

## Semester V

- Counsel the mother/caretaker about her own health

### 7. CONDUCT FOLLOW UP VISIT

### 8. THE IMNCI CHART BOOKLET

### 9. INITIAL ASSESSMENT

### 10. CARING FOR THE YOUNG CHILD 0 TO 2 MONTHS OLD:

- Major illness and care
- Bacterial infection-neonatal tetanus, neonatal sepsis
- Diarrhea
- Feeding problem or low weight
- Breastfeeding problem
- Oral or intramuscular antibiotics
- Fluid for treatment of diarrhea

### 11. MANAGEMENT OF THE YOUNG CHILD 0 TO 2 MONTHS OLD:

- Does The Child Have Diarrhoea?
- Does The Child Have Fever?
- Does The Child Have An Ear Problem?
- Check The Child's Immunization Status:
  - Assess Child's Feeding If Child Has Anaemia Or Very Low Weight Or Is Less Than 2 Years Old:
    - Check For Feeding Problems

## Unit III | Pediatric Care Of The Child With Hematologic/Immunologic Problems

### 1. ANEMIAS – A PALE OR “YELLOW” CHILD:

- Causes of anemia
- Types of anemia:
  - Iron deficiency anemia



- Hookworm anemia
  - Folic acid deficiency anemia
  - Hemolytic anemia
  - Sickle cell anemia
- Treatment varies with the type and severity- transfusion

## **Unit IV | Pediatric Care Of A Child With Disorders Of The Respiratory Tract**

### **1. BRONCHITIS**

### **2. LOWER RESPIRATORY TRACT INFECTIONS/CONDITIONS:**

- Pneumonia
- Whooping Cough
- Tuberculosis
- Asthma
- Carbon dioxide poisoning
- Sudden death syndrome

### **3. ACUTE RESPIRATORY TRACT INFECTIONS**

## **Unit V | Pediatric Care Of The Child With Cardiac Conditions**

- Congenital heart disease
- Heart failure
- Endocarditis
- Rheumatic fever
- Hypertension
- Coronary artery disease (CAD)

## Semester V

### **Unit VI | Pediatric Care of the Child With Gastrointestinal System Problems**

- Cleft lip
- Cleft palate
- Appendicitis
- Peptic Ulcer
- Bowel Obstruction
- Pyloric stenosis
- Intussusceptions
- Mal-rotation
- Volvulus
- Abdominal hernias
- G.I. bleeding

### **Unit VII | Care of Children with Communicable Diseases**

- Tetanus
- Malaria
- Measles
- Polio
- Diphtheria
- Pertusis
- Tuberculosis
- Yellow Fever
- Chicken Pox
- Mumps
- Rubella
- Influenza

## **Unit VIII | Pediatric Care For A Child With Congenital Abnormalities**

- Undescended testes/cryptorchidism
- Hydrocele
- Hypospadias
- Inguinal hernia
- Testicular torsion
- Vaginal atresia Imperforated hymen
- Pseudoharmophrodia

## **Unit IX | Pediatric Care Of The Client With EENT Disorder**

- Tonsillitis
- Otitis Media
- Laryngitis
- Acute viral laryngitis
- Conjunctivitis
- Myopia, retinal detachment, pressure in eyes, refraction errors

## **Unit X | Pediatric Care Of The Child With Cerebral Disorders**

- Bacterial Meningitis
- Encephalitis
- Rabies
- Brain abscess
- Seizures
- Febrile seizures
- Epilepsy
- Headaches

## **Unit XI | Pediatric Care Of The Child With Nervous System Problems**

- Brain Tumour

## **Unit XII | Pediatric Care Of The Child With Endocrine Disorders**

- Diabetes
- Thyroid
- Goiter
- Cushing's syndrome

## **Unit XIII | Pediatric Care of the Febrile Child**

- Malarial, viral and bacterial causes
- Hyperthermia – how high a fever is too high?
- History and examination
- Diagnostic tests if available
- Danger signs
- Assessment
- Diagnosis and treatment of uncomplicated malaria – see malaria control manual
- Treatment of complicated malaria (including cerebral)
- Fever of unknown origin (FUO)
- Management

## **Unit X IV | Pediatric Care for the Child Who Has a Seizure**

- Necessary points in a history
- Stopping status epilepticus with diazepam
- A history diagnostic of epilepsy with no fever and rapid recovery doesn't need every test (but a rapid malaria test would be good), but needs anti-seizure meds given monthly
- Simple febrile seizures – but if in doubt, treat for malaria

- The child has fever and a seizure and is looking very ill:
  - What else to look for and check
  - Treating for cerebral malaria – see malaria control manual
  - Do the simple tests below for possible meningitis
- Meningitis:
  - Signs and symptoms – not breastfeeding, very ill, fever, often seizure, confused and irritable or unconscious; older child may have stiff neck; infant may have bulging fontanel – should be detected before this develops
  - Check for meningitis but also check perform RDT for malaria
  - Rapid detection and treatment are necessary – delay will cause death or brain damage – if unable to do tests, treat anyway

## **Unit XV | Pediatric Care for Accidents and Poisoning in Children**

- Traumatic accidents – auto, significant falls, blows
- Cuts
- Burns
- Common poisonings:
  - Taking parent's medicine
  - Kerosene
  - Caustic soda
  - Immediate care of poisonings
  - Choking

## **Unit XVI | Pediatric Care for Other Emergencies in Children**

- Shock
- Fainting
- Drowsiness, coma

## **Unit XVII | Pediatric Care of the Child with Mobility Disorders/ Problems**

- Amputation
- Contusions
- Dislocation
- Osteomyelitis
- Skeletal tuberculosis
- Muscular dystrophy
- Club foot
- Congenital hip dysplasia
- Juvenile rheumatoid arthritis
- Bruises, sprains and fractures

## **Unit XVIII | Pediatric Care for Skin Diseases in Children**

- Malnourished skin and hair
- Scabies
- Myiasis
- Chigoe fleas
- Bedbugs
- Lice:
  - Head lice
  - Body
  - Pubic
- Ringworm
- Warts
- Leprosy
- Urticaria

- Eczema
- Impetigo
- Acne at puberty
- Albinism and its problems:
  - Basal cell carcinoma
  - Squamous cell carcinoma
  - Skin ulcer

### **Unit XIX | Pediatric Care for of the Client with Reproductive System Disorders**

- Undescended testes/cryptorchidism
- Hydrocele
- Hypospadias
- Inguinal hernia
- Testicular torsion
- Female
- Imperforate hymen
- Adolescent pregnancy

### **Unit XX | Pediatric Care for Care of the Client with EENT Disorder**

- Tonsillitis
- Otitis Media
- Laryngitis
- Acute viral laryngitis
- Conjunctivitis
- Myopia, retinal detachment, pressure in eyes, refraction error

## **Semester V**

- Pediatric care for other selected disorder: Pathophysiology, Pharmacology, Management and Concerns:
  - Genitourinary function
  - Care of the child with Genitourinary System problems
  - Polycystic kidney disease
  - Hydronephrosis
  - Urinary tract infection
  - Nephrotic Syndrome
  - Glomerulonephritis
  - Shistosomiasis
  - Endocrine disorders

## **Unit IX | Care of the Child with Endocrine Disorders**

- Diabetes
- Thyroid
- Goiter
- Cushing's syndrome
- Mental health and cognition

## **Unit XIV | Care of the Child with dental disorders**

- Gingivitis
- Dental caries
- Periodontal abscess

## **Unit XV | Care of the child with cancer**

- Leukemia
- Wilm's tumor



- Lymphoma:
  - Burkitt's lymphoma
- Osteosarcoma
- Nursing care of the child with neuromuscular disturbances:
  - Spinal cord injuries
  - Cerebral palsy

## **Unit XII | Care of the Child with Reproductive System Disorders**

- Undescended testes/cryptorchidism
- Hydrocele
- Hypospadias
- Epispidias
- Inguinal hernia
- Testicular torsion
- Imperforate hymen

# Pediatrics II Clinical Course

## **Clinical Course Description:**

This course will enhance the skills and knowledge of the learner drawn from previous clinical experiences while working with sick/well children and their families.

## **Clinical Objectives:**

At the end of this clinical course, the learner will be able to:

- Develop individualized care plans
- Deliver appropriate care to the paediatric client based on diagnosis, age and developmental stage
- Work effectively with other members of the health team to improve care of children and their families
- Educate the client and family about available support that can help with difficulties concerning child diagnosis and treatment
- Use relevant cultural norms and practices to communicate with clients, families and team
- Demonstrate good documentation of patient care

## **Clinical Placement:**

- Paediatric Units
- Outpatient Departments
- Clinics
- Health Centres
- Schools

## **Clinical Skills:**

- Assessing the sick child
- Admitting the sick Child
- Bathing the sick Child
- Calculating pediatric drug dosages and IV fluids
- Administering Oxygen
- Inserting Naso-gastric tubes and urine catheters

- Preparing a child and family for surgery
- Making bed for the sick child
- Preparing Care plans

**Competencies:**

<b>Knowledge</b>	<b>Attitude/Behaviours'</b>	<b>Skills</b>
Uses knowledge from midwifery, health and other disciplines combined with best available evidence to explain midwifery decisions and interventions	Values the importance of data to improve midwifery practice	Individually, or as a member of a group, uses information effectively to accomplish a specific purpose
Demonstrates understanding of the diversity of the human condition	Values the inherent worth and uniqueness of individuals and populations	Provides holistic care that addresses the needs of diverse populations across the life span  Understands the effects of health and social policies on persons from diverse backgrounds
Explains the role of evidence in determining best clinical practice	Questions the rationale of supporting routine approaches to care processes and decisions  Values the need for continuous improvement in clinical practice based on new knowledge	Facilitates integration of new evidence into standards of practice, policies, and midwifery practice guidelines
Understands that care and services are delivered in a variety of settings along a continuum of care that can be accessed at any point	Values assessing health care situations "through patient's eyes"	Assesses patient values, preferences, decisional capacity, and expressed needs as part of ongoing assessment, clinical interview, implementation of care plan, and evaluation of care
Understands that legal, political, regulatory and economic factors influence the delivery of patient care	Appreciates that legal, political, regulatory and economic factors influence the delivery of patient care  Values the need to remain informed of how legal, political, regulatory, and economic factors impact professional Midwifery practice	Provides care based on current legal, political, regulatory, and economic requirements  Articulates issues at the work unit level that impact care delivery
Differentiates clinical opinion from research and evidence summaries	Appreciates that the strength and relevance of evidence should be determinants when choosing clinical interventions	Applies original research and evidence reports related to area of practice  Contributes to the integration of best current evidence into Microsystems practices

## Semester V

Knowledge	Attitude/Behaviours'	Skills
Identifies contributions of other individuals and groups in helping patients and families achieve health goals	Respects the centrality of the patient and family as core members of any health care team	Participates in the use of quality indicators and core measures to evaluate the effect of changes in the delivery of care
Identifies leadership skills essential to the practice of midwifery	Recognizes the role of the midwife as leader	Assumes the role of team member or leader based on the situation

### Practical/Clinical Assessment:

- Clinical Logs
- Clinical Practicum
- OSCE
- Case Presentations

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### Teaching/Learning Strategies:

- Lectures
- Discussions
- Assignments
- Presentations

### References:

*Child health Nursing; Partnering with Children & Families*, J. Ball, R. Bindler, and K. Cowen, 2010.

AMREF, Child Health 2012

Integrated Management of Neonatal and Childhood Illness: Liberia Modules 2013

Hockenberry, M. J., Winkelstein, M. L., & Kline, N. E. (2003). *Wong's nursing care of infants and children*, 7ed. China, Mosby

*Primary Child Care*, Dr. Maurice and Felicity King.

*Essentials of Pediatric Nursing*, 8th Ed., 2005.

### Course Expectations:

The student is expected to:

- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments

- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

**Assessment Criteria – Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Introduction to Research

**Credits:**

2

**Placement:**

First semester of third year

**Duration:**

16 Weeks (14 instructional and 2 exams) 28 Classroom hours

**Pre-requisites:**

Must be a graduating senior and have completed all courses up to Semester V

**Course Description:**

The course is designed to introduce the students to the concepts and principles of scientific research inquiry, critical appraisal and research process in midwifery. The knowledge and skills acquired will enable them as members of the health team to ethically participate in conducting research, as well as applying the findings of research to practice.

**Course Objectives:**

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

- Understand the concepts and principles of evidence-based research and apply them in participating in conducting research
- Write research reports

**Specific Objectives:**

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

- Define and explain the concept of research
- Explain the importance of research to midwifery and the role of the midwife in research
- Describe the types of research
- Describe steps in the research process
- Explain the ethical principles in the conduct of human research
- Describe how to utilize research finding in practice
- Describe the components of a research report

**Course Content:**

## **Unit I | Foundations of Research and Evidence Based Practice**

### **1. INTRODUCTION TO RESEARCH IN AN EVIDENCE-BASED ENVIRONMENT:**

- Sources of evidence in nursing/midwifery practice

### **2. PURPOSES OF RESEARCH IN MIDWIFERY**

### **3. DEFINITION AND CONCEPT OF RESEARCH:**

- Definition of research
- Historical overview
- Sources of knowledge and characteristics of the scientific method
- Differences between research and problem solving

### **4. IMPORTANCE OF RESEARCH IN MIDWIFERY:**

- Relevance To The Profession

### **5. IMPORTANCE OF RESEARCH TO:**

- Education
- Practice
- Administration
- Public And Community Health

### **6. ETHICAL PRINCIPLES IN THE CONDUCT OF HUMAN RESEARCH**

### **7. HUMAN SUBJECT FOR RESEARCH**

### **8. ETHICS AND REGULATIONS IN HUMAN RESEARCH:**

- Ethics Committees/Review Boards
- Consent/Informed Consent
- Confidentiality:
  - Veracity
  - Beneficence
  - Nonmaleficence
  - Justice

## Semester V

- Privacy/Anonymity, etc.

## Unit II | Types of Research

- Basic And Applied
- Non – Experimental – Two Groups, etc.

### 1. KEY CONCEPTS AND STEPS IN QUALITATIVE AND QUANTITATIVE RESEARCH:

- Variables
- Quantitative research:
  - Experimental
  - Non-experimental
- Qualitative research:
  - Grounded theory
  - Phenomenological
  - Ethnographic
  - Others

### 2. CONCEPTUALIZING RESEARCH PROBLEMS, RESEARCH QUESTIONS, AND HYPOTHESES:

- Basic terminology
- Study Aims and purpose
- Problem statement:
  - Sources of research
- Research Questions
- Research Hypothesis

### 3. STEPS IN RESEARCH PROCESS:

- Problem – sources, identification, statement, criteria for selecting problem, objectives, propose, significance
- Literature review – sources, existing literature, primary and secondary sources



- Manual/electronic search/databases; presentation of literature review

#### **4. RESEARCH VARIABLE, HYPOTHESIS AND RESEARCH QUESTIONS:**

- Definition of research variables, characteristics, types
- Definition of hypothesis, characteristics and types
- Definition of research questions, characteristics and types

#### **5. RESEARCH DESIGN:**

- Experimental – various types
- Quasi experimental
- Non experimental – various types
- Quantitative vs. qualitative designs

### **Unit III | Population Sample and Sampling Techniques**

- Definitions
- Scientific/probability sampling
- Non-scientific/non-probability sampling
- Sample size calculation

#### **1. LITERATURE REVIEWS:**

- Types/sources of information
- Strategies and steps when reviewing literature
- Critique of Literature

#### **2. DESIGNING QUALITATIVE AND QUANTITATIVE STUDIES:**

- Measurement and Data Collection
- Developing a Sampling Plan

#### **3. DATA COLLECTION:**

- Method of Data Collection – Observation, Interview, Psychological Test, Mechanical Instruments, Questionnaire, etc.
- Development Of Data Collection Instruments

## **Semester V**

- Characteristics Of Instrument – Validity, Reliability
- Pilot Testing
- Levels Of Measurement – Nominal, Ordinary, Interval, Ratio

### **4. DATA ANALYSIS AND PRESENTATION FINDINGS**

### **5. ORGANIZATION OF DATA**

### **6. FREQUENCY DISTRIBUTION/FREQUENCY DISTRIBUTION TABLE**

### **7. STATISTICS:**

- Descriptive Statistics – Measures Of Central Tendency; Measure Of Dispersion
- Inferential Statistics – T – Test, Chi – Square, Correlation, Analysis of Variance (Anova), etc.

### **8. HYPOTHESIS TESTING/CONFIDENCE INTERVAL**

### **9. UNIT IV PRESENTATION OF RESULT AND FINDINGS**

### **10. INTERPRETATION AND DISCUSSION OF FINDINGS:**

- Interpretations of findings
- Discussion – relationship with existing literature and other studies
- New findings
- Conclusion, recommendations
- Suggestions for further studies

### **11. APPENDICES**

### **12. REFERENCES**

## **Unit V | Dissemination/Communication of Findings**

- Writing research reports
- Introduction to proposal writing
- Utilization of research findings:
- Application to practice, education, clinical practice, etc.
- Critiquing research studies

**Competencies**

<b>Knowledge</b>	<b>Attitudes/Behavior</b>	<b>Skills</b>
Demonstrates knowledge of basic scientific methods and processes	Appreciates strengths and weaknesses of scientific bases for practice  Values the need for ethical conduct in practice and research	Participates in appropriate data collection and other research activities  Adheres to Institutional Review Board (IRB) guidelines
Describes the concept of EBP including the components of research evidence, clinical expertise and patient/family values	Values the concept of EBP as integral to determining best clinical practice	Bases individualized care plan on best current evidence, patient values and clinical expertise
Describes reliable sources for locating evidence reports and clinical practice guidelines	Appreciates the importance of accessing relevant clinical evidence	Locates evidence reports related to clinical practice topics and guidelines
Differentiates clinical opinion from research and evidence summaries	Appreciates that the strength and relevance of evidence should be determinants when choosing clinical interventions	Applies original research and evidence reports related to area of practice  Facilitates the integration of best current evidence into system practices
Explains the role of evidence in determining best clinical practice	Questions the rationale supporting routine approaches to care processes and decisions  Values the need for continuous improvement in clinical practice based on new knowledge	Facilitates integration of new evidence into standards of practice
Identifies evidence-based rationale when developing and/or modifying clinical practices  Understands data collection methodologies appropriate to individuals, families, and groups in meeting health care needs across the life span	Acknowledges own limitations in knowledge and clinical expertise before seeking evidence and modifying clinical practice	Uses current evidence and clinical experience to decide when to modify clinical practice

**Teaching/Learning Strategies:**

- Classroom presentations
- Guest Lecturers
- Discussion
- Use of internet

## Semester V

### Course Expectations:

- Regularly attend classroom and laboratory sessions
- Complete all clinical hours
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class, laboratory and clinical practicum
- Complete all assignments and examinations on due dates

### References:

*The Practice Of Nursing Research: Conduct, Critique and Utilization*, 5th Ed., N. Burns and S.K. Grove, 2005.

*Research Methodology: A Step by Step Guide for Beginners*, 2nd Ed., R. Kumar, 1999.

Pilot D. and Hungler B. *Nursing Research principles and Methods*. (Latest Edition). Philadelphia: Lippincott.

### Assessment Criteria—Standard Grading System:

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Administration (Leadership and Management)

**Credits:**

3

**Placement:**

First semester of third year

**Duration:**

16 Weeks (14 instructional and 2 for exam)

42 hours classroom

126 hours clinical

**Prerequisites:**

Basic English &amp; Math, ICT, Fundamentals of Midwifery I &amp; II, Midwifery I &amp; II, PHC I &amp; II

**Course Description:**

This course prepares a student to become a leader, manager, an advocate for patients who acts on policies and regulations in improving the health systems. It also equips the learner with the knowledge, skills and attitudes to promote quality health services. This course will enhance the student's ability to problem-solve, make decisions and act on policies and regulations, as well as, help the students to analyze professional midwifery practice and develop an understanding of career planning.

**Broad Objectives:**

At the end of this course, the student will:

- Have an understanding of leadership concepts essential for professional practice.
- Applied human resource management principles and theories related to delegation, allocation, supervision of personnel, and Staff performance appraisal methods.
- Describe financial resources management informed by understanding of issues prevailing in the specific health care system and/or service.
- Describe effective implementation of quality improvement initiatives in midwifery services.
- Applied principles and theories for effective health information system for decision making, including data management, monitoring and evaluation in the provision of midwifery services.
- Have an understanding of Public Health policy formulation process, the impact of the policy on service delivery and the role of midwifery to the national health agenda.

## Semester V

- Applied appropriate knowledge, skills and attitude in managing midwifery services, especially at the clinic level.
- Utilize health information to inform decision-making.

### **Specific Objectives:**

At the end of this course, the learner will be able to:

- Describe the four major functions of management and activities involve in each.
- Describe Leadership concepts essential for professional practice.
- Discuss the management of human resources within the legal framework of governing labor practice in the health sector.
- Explain the importance of an effective working team and environment through effective communication between patients, midwifery and other healthcare personnel.
- Outline the human resource management, principles and theories related to delegation, allocation and supervision of personnel.
- Describe financial resources management informed by understanding of issues prevailing in the specific health care system and/or service.
- Describe staff performance appraisal methods based on institutional policy and recognized criteria for performance appraisal.
- Apply quality improvement initiatives in nursing and midwifery services.
- Describe fundamentals of monitoring and evaluation in the provision of care.
- Discuss the process for formulation of public health policy, the impact of the policy on service delivery and the role of nursing and midwifery to the national health agenda.

### **Course Content:**

## **Unit I | A New Approach to Leadership and Management**

### **1. INTRODUCTION TO MANAGEMENT AND MANAGEMENT DECISION MAKING:**

- Philosophy
- Principles
- Management theories
- Fundamentals of leadership

- Styles
- Management theories applicable to health sector
- Change management
- Strategic planning
- Major Management Functions:
  - Planning – types of plan (operational, tactical, strategic, long-term, short-term, etc.); characteristics of a good plan; decision making process
  - Organizing – structure/design of organizations; staffing; interdepartmental
  - Directing – leadership, delegation of responsibility, authority, supervision and accountability, motivation, team work communication, coordination and delegating
  - Controlling – establishment of standards, job performance evaluation, discipline, financial control – accounting and budgeting

## **2. DECISION MAKING, PROBLEM SOLVING AND CRITICAL THINKING:**

- Decision-making process
- Principles in making a decision

## **3. HUMAN RESOURCE MANAGEMENT:**

- Recruitment of personnel:
  - Delegation
  - Supervision and follow up of personnel
  - Working as a team
  - Motivation
  - Ethics in healthcare management
  - Conflict management
  - Staff development/continuing education/in-service education
  - Staff appraisal
  - Professional associations and regulatory agencies – composition and functions
  - Leading and Coaching the professional team

## Semester V

### **4. MANAGEMENT SUPPORT SYSTEM:**

- Drugs and medical supplies:
  - Ordering/Procurement
  - Usage
  - Protection and storage
  - Inventory
  - Problems
  - Revolving drug fund
  - General supplies:
    - Sources
    - Purchase
    - Receiving supply orders
    - Recording keeping and reporting

### **5. FINANCE MANAGEMENT/MONEY:**

- Budgeting process:
  - Managing budgets
  - Resource allocation
- Accounting
- Revenue

### **6. OTHER RESOURCES MANAGEMENT:**

- Time
- Space – land, buildings and infrastructure
- Procurement

### **7. CONCEPTS AND ISSUES:**

- Communication and group dynamics
- The health team
- Community participation



- Inter-sectorial and interdisciplinary collaboration
- Health insurance scheme
- Reforms in education and practice

#### **8. HEALTH INFORMATION MANAGEMENT SYSTEM, MONITORING AND EVALUATION:**

- Data management:
  - Collection
  - Entry
  - Analysis
  - Reporting
- Monitoring and Evaluation:
  - Principles
  - Purpose
  - Importance of
  - The process
  - Indicators
- Management audit
- Evaluation techniques

### **UNIT II | Ethics, Policies and Advocacy**

#### **1. PUBLIC HEALTH POLICY:**

- Public health policy formulation
- Policy analysis
- Policy implementation
- Policy implementation monitoring
- Policy evaluation
- MOHSW policies
- Ethics in leadership

## **Semester V**

### **2. ADVOCACY:**

- Definition
- Process

### **3. QUALITY IMPROVEMENT:**

- Definition
- Quality Improvement Concepts:
  - Dimension of Quality
  - Perception of Quality
- Quality Improvement Process:
  - Standard Based Management and Recognition
- Risk Management

### **4. FACILITIES AND EQUIPMENT MAINTENANCE:**

- Proper use of facilities and equipment
- Preventive maintenance
- Repairs inventory facilities and equipment

### **5. REPORTING LOSS, THEFT OR DAMAGE**

### **6. TRANSPORTATION:**

- Resources
- Transportation needs
- Emergency
- Transportation plans

## **Unit IV | Roles and Functions in Organizing**

### **1. ORGANIZATION OF WORK AT THE HEALTH CENTER:**

- Division of work location
- Movement of health workers
- Movement of patient

- Use of manpower
- Building
- Space
- Equipment
- Provision of services in limited space and resources

## **2. HEALTH INFORMATION:**

- Uses of health information
- Types of health information records
- Reports
- Filing and retrieving data
- Monitoring and evaluation

## **Unit V | Roles and Functions in Staffing**

### **1. PERSONNEL:**

- Recruitment and selection
- Performance evaluation
- Managing conflict
- Handling grievances
- Disciplinary action

### **2. FUNCTIONS OF MID-LEVEL HEALTH WORKERS:**

- Job descriptions
- Modifying JDs to meet community needs

## **Unit VI | Roles and Functions in Directing**

### **1. DEVELOPING LEADERSHIP:**

- Democratic
- Autocratic

## Semester V

- Laissez faire
- Transformation leadership
- 2. ATTITUDES INFLUENCING LEADERSHIP (CULTURAL, SOCIO-ECONOMIC, POLITICAL FACTORS)**
- 3. CHARACTERISTICS OF GOOD LEADERS**
- 4. FUNCTIONS OF THE TEAM:**
  - Roles of team leaders versus team members
  - How team functions
  - Group dynamics
- 5. FACTORS PROMOTING MOTIVATION AND DE-MOTIVATION (LINKS WITH SBM-R):**
  - Supervision
  - Motivators:
    - Incentives
    - Job satisfaction
    - Good interpersonal relationship
    - Career ladder
    - Continuing education
    - Conducive working environment
    - Capacity building
  - De-motivators:
    - Low salary and benefits
    - Poor working conditions
    - Lack of opportunities for professional development
    - Ambiguous policies
    - Authoritarian system of administration

## Unit VII | Health Care Organization Systems

### 1. THE HEALTH CARE SYSTEM ORGANIZATIONAL CLIMATE AND CULTURE OF THE HEALTH CARE SYSTEM, MISSION STATEMENT, POLICIES AND PROCEDURES

### 2. DECENTRALIZATION AND SHARED GOVERNANCE:

- Data management and information
- Strategic management and marketing
- Care management:
  - Models of care delivery
  - Case management
  - Disease management
  - Patient and family cultural value
  - Communication, persuasion and negotiation
  - All hazard disaster preparedness
  - Evidenced based practice: strategies for midwifery leaders

### 3. HUMAN RESOURCE MANAGEMENT:

- Recruitment of personnel
- Delegation
- Supervision and follow up of personnel
- Motivation
- Ethics in healthcare management
- Conflict management
- Staff appraisal

### 4. LEADING AND COACHING THE PROFESSIONAL TEAM:

- Motivation
- Power and conflict
- Delegation
- Team building and working with effective groups

## Semester V

### **5. CONFRONTING SHORTING, CULTURAL AND GENERATIONAL WORKFORCE DIVERSITY:**

- Staff recruitment and retention
- Performance appraisal
- Prevention of work place violence
- Collective bargaining
- Staffing and scheduling

### **6. FISCAL MANAGEMENT:**

- Financial management
- Budgeting
- Productivity and costing out

### **7. MANAGEMENT OF THE HEALTH FACILITY:**

- Introduction and overview
- Definition and principles
- MOHSW policy on drugs and supplies
- Management principles:
  - Main functions of management
  - Planning
  - Implementation
  - Evaluation
  - Organization
  - Communication
  - Controlling and assessing the work
  - Recruitment, selection and orientation
  - Training
  - Scheduling
  - Posting and transferring
  - Promotion

- Resignation
- Leave procedures
- Performance evaluation
- Disciplinary action
- Grievances
- Facilities and equipment
- Operating, maintaining and repairing facilities and equipment
- Transportation
- Finance
- Revenue
- Expenditures
- Drugs and medical supplies
- Storage and protection
- Inventory and data collection
- Management information system/reporting

**8. OUTCOME MANAGEMENT:**

- Change and innovation
- Quality improvement and health care safety
- Measuring and managing outcome

**Unit VIII | Public health policy formulation**

- Public health policy formulation
- Policy analysis
- Policy implementation
- Policy implementation monitoring
- Policy evaluation

# Administration

## Clinical Course Description

This course is designed to enable the learner to acquire, attitudes and skills necessary for health services management. The focus will be on developing competencies in problem-solving, decision making, resource management, policy analysis and interpretation, change initiation, performance appraisal and quality improvement. This course will also help the learner to monitor and evaluate practice.

### Clinical Objectives:

At the end of this course, the learner will be able to:

- Demonstrate ability to lead and manage multidisciplinary teams.
- Demonstrate competency in managing human resource in line with country's legal framework and labor practices within the health sector.
- Demonstrate ability to create positive working environment through effective communication.
- Delegate, supervise, direct and control personnel in carrying out their roles in achieving patient care goals.
- Manage financial and other health care resources based on informed understanding of issues prevailing in the specific health care system and/or service.
- Appraise staff performance based on institutional policy and recognised criteria for performance appraisal
- Apply the fundamentals of monitoring and evaluation in the provision of care.
- Demonstrate ability to lead and manage change in health care practice with the aim of improving quality of care.
- Facilitate self and personnel continuous professional development.
- Demonstrate collaborative skills with multi-disciplinary health care providers, clients, and midwifery leaders to promote health for individuals, families, and groups.

### Clinical Placement:

- Hospital Wards(Stations)
- Nursing Director's Office
- Out-Patient Department
- Hospital Administration



- Community Health Department

### Clinical Skills:

- Documenting and reporting
- Writing Reports and Proposals
- Chairing Staff Meetings
- Supervising and evaluating
- Budgeting
- Making Rounds
- Taking inventories

### Competencies

Knowledge	Attitude/Behavior	Skills
Identifies leadership skills essential to the practice of midwifery	Recognizes the role of the midwife as leader	Integrates leadership skills of systems thinking, communication, and facilitating change in meeting patient care needs
Understands human behavior, mental processes, and individual and group performance  Identifies the roles and skills of the health care team	Recognizes the centrality of a multidisciplinary team approach to patient care  Values the perspectives and expertise of each member of the health care team	Demonstrates ability to effectively participate in multidisciplinary teams  Promotes a productive culture by valuing individuals and their contributions  Models effective communication and promotes cooperative behaviors  Shows tolerance for different viewpoints
Understands the principles of accountability and delegation patient care goals	Recognizes the value of delegation  Accepts accountability for care given by self and delegated to others  Accepts accountability and responsibility for one's own professional judgment and actions	Participates in the change process to improve patient care, the work environment, and patient and staff satisfaction  Assigns, directs, and supervises ancillary personnel and support staff in carrying out particular roles/functions aimed at achieving patient care goals and the principles of accountability

**Teaching/Learning Strategies:**

- Lectures
- Classroom presentations
- Role plays
- Group exercises
- Educational games
- Case studies
- Demonstration
- Coaching
- Reflective diaries
- Homework and laboratory assignments

**Course Expectations:**

- Regularly attend classroom and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and examinations on due dates

**Required Resources:**

- Learning exercises
- Journal
- Clinical practicum for leadership rotation
- Feedback form from clinical preceptor (see ETS manual for examples)

**References:**

Yoder-Wise, Patricia, *Leading and Managing in Nursing*. 3rd edition. Mosby, 2000. Kelly-Heidenthal, Patricia, *Nursing Leadership and Management*. Delmar-Thompson, 2003.

Swansburg, R. and Swansburg, R. *Introduction to Management and Leadership for Nurse Managers*. 3rd Edition. Jones and Bartlett Publishers. 2002

Tappen, R., Weiss, S., Whitehead, D. *Essentials of Nursing Leadership and Management*. 3rd Ed. 2004. F.A. Davis, Philadelphia

Treas, L. Editor. *Nursing Leadership and Management*.3.1 Ed.ATI. Kansas. 2006

**Assessment Criteria—Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%

# Course Title: Simplified Diagnosis and Treatment

**Credits:**

3

**Placement:**

First semester of year 3

**Duration:**

16 Weeks (14 instructional and 2 for exam)

42 theoretical hours

126 clinical hours

**Pre-requisites:**

Ethical & Prof. Adjustment, Midwifery I & II, Tropical & Communicable Diseases, Pharmacology, Fundamentals of Midwifery I & II, PHC I & II, Health Assessment

**Course Description:**

This course is designed to expand students' skills in diagnosing and treating common diseases in Liberia. In this course the knowledge and skills the student have acquired, especially in taking vital signs, history taking and physical exam, as well as the meaning of findings are placed in a logical framework so the student arrives at a rapid and correct diagnosis using the logical framework. The course uses the "Handbook for Health Personnel in Liberia" as a text, and the ten 5 x 8 cards that summarize the process of rapid diagnostic choices to teach this method. Handling of emergencies is also covered. Community Health, including health education, nutrition, MCH, prenatal care, family planning, environmental sanitation and working with CHVs is also covered and emphasized. This course equips the student to functioning at the clinic level, linking the clinic with the community and working with community level providers

**Broad Objectives:**

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

- Correctly diagnose the more common disease conditions found in Liberia
- Provide the correct treatment for these illnesses using drugs in the formulary from MOHSW
- Recognize those conditions which he or she is unable to treat or unable to diagnose, and appropriately refer them
- Understand and appreciate rural communities, their culture and their health problems
- Act as a change agent for better health in catchment communities of the clinic
- Work with the CHVs and TTMs to improve health and reduce maternal mortality

- Work with communities and community elders to act as a change agent in improving the health of the community

**Specific Objectives:**

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

- Assess and manage lacerations
- Assess and manage burns
- Rehydrate any degree of dehydration in children and adults
- Assess and appropriately treat, including referral for coma, shock and seizures
- Identify and refer surgical abdominal emergencies
- Provide clinic level management for other common selected emergencies
- Diagnose and treat selected common parasites
- Choose between causes of fever and manage appropriately
- Diagnose and treat malaria according to the guidelines of NMCP
- Diagnose and treat diarrhea and amebic dysentery
- Manage symptoms of peptic ulcer
- Incise and drain abscesses
- Diagnose and treat pneumonia
- Choose appropriate antibiotics for likely penicillin-resistant staphylococcal organisms
- Diagnose and treat or appropriately refer anemias
- Recognize and correctly treat pyelonephritis at the clinic level including referral as needed
- Recognize, give emergency treatment, and immediately refer meningitis and tetanus
- Diagnose patients with leprosy
- Assess patients suggestive of tuberculosis
- Diagnose epilepsy
- Use every opportunity to provide health education using the various methods
- Prevent kwashiorkor and marasmus by recognizing early signs of malnutrition and counseling mothers

## Semester V

- Apply triage in health care settings
- Provide appropriate family planning counseling and contraceptive choices

### Course Content:

## Unit I

### 1. EMERGENCIES:

- Wounds:
  - Abrasions
  - Lacerations
  - Punctured wounds
- Burns
- Sprains
- Fractures
- Dehydration
- Bleeding and shock
- Unconsciousness
- Dislodgement of airway obstruction
- Seizures
- Ectopic pregnancy, poisoning
- Snakebite and other emergencies

## Unit II | Parasites

- Intestinal worms:
  - Ascaris
  - Hookworm
  - Strongyloides
  - Trichuris
  - Pinworm and taenia

- Intestinal protozoa:
  - Giardia
  - Entameba histolytica
  - Balantidium coli
  - Malaria
  - Other Parasites
  - Trichomoniasis
  - Onchocerciasis
  - Schistosomiasis
  - Filariasis
  - Trypanosomiasis
  - Paragonimiasis
  - Other skin parasitic infestations
  - Scabies
  - Pediculosis
  - Bedbugs
  - Tungiasis
  - Myiasis

### **Unit III | Acute Illnesses**

#### **1. GASTROINTESTINAL AND ENDOCRINE COMPLAINTS:**

- Vomiting, diarrhea and constipation
- Distention, melena, rectal bleeding and jaundice
- Gastritis and abdominal pain Abdominal mass, and G.I. complaints:
  - Complaints suggesting thyroid problems and diabetes:
    - Diagnostic cards for G.I. and endocrine complaints

## Unit IV | Fevers and Cellulitis

- The causes of fever
- Identification of the cause
- Abscesses
- Cellulitis
- Buruli Ulcers/country sores

## Unit V | Respiratory, Cardiovascular, Urinary and Reproductive Systems Complaints

- Respiratory:
  - Fresh cold
  - Sore throat
  - Cough
  - Wheezing
- Cardiovascular:
  - Heart palpitation:
    - Shortness-of-breath
    - Chest pain
    - Anemia
    - Hypertension
  - Urinary of Dysuria:
    - Frequency
    - Hematuria
    - Difficulty urinating,
    - Flank pain
    - Urethral discharge
    - Vaginal discharge
    - Infertility
    - Impotence
    - Review of diagnostic cards for these four systems



- Review of other selected acute illnesses

## **Unit VI | Head and Nervous System Complaints**

- Anxiety
- Depression, “open mole,” psychosis
- Stroke
- Meningitis
- Tetanus
- Headache
- Eye complaints
- Earache
- Nosebleed

## **Unit VII | Bone, Joint, Muscle, Swelling, Malnutrition and Skin Complaints**

- Bone pain
- Joint pain
- Joint swelling
- Ascites
- Edema
- Muscle weakness
- Malnutrition
- Kwashiorkor and Marasmus
- Skin complaints
- Review of diagnostic cards for head, nervous system, bone, muscle, swelling, malnutrition and skin
- Review of selected acute illnesses

## Unit VIII | Chronic Illnesses

- The midwife role in the prevention, diagnosis and treatment of:
  - HIV
  - Leprosy
  - TB
  - Heart Failure
  - Hypertension
  - Diabetes
  - Epilepsy
  - Rheumatoid arthritis
  - Sickle cell anemia

## Unit IX | Community Health and Preventive Medicine

- Health education /BCC activities
- Nutrition - ENA
- Provision of health care services
- Children's clinics - EPI
- Prenatal clinic
- Basic EmONC-signal functions and essential newborn care
- Home Based Maternal and Newborn Care
- Kangaroo Mother Care, Chlorhexidine for cord care
- Family Planning Programs - CBFP
- Outreach programs and disease surveillance
- Reportable diseases
- Environmental sanitation

## **Unit X | Working with Community Health Workers/Volunteers - Training and Supervising**

- Training for community members - Adult education Principles
- Supportive supervision of community level providers
- Health education and BCC at community level
- Provision of quality services by community level workers/Quality improvement at community level
- Record keeping and reporting by community level providers

# Simplified Diagnosis and Treatment Clinical Course

## **Clinical Course Description:**

This clinical course will provide the learner with an opportunity to enhance basic skills acquired from previous clinical courses. It provides opportunity for in depth and more focused assessment and treatment of patients in real life settings. The student also is given the opportunity to collaborate and consult with members of the health team.

## **Clinical Objectives:**

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

- Conduct comprehensive health assessment of a patient using appropriate assessment tools
- Accurately document data gathered from assessment
- Interpret laboratory findings
- Diagnose patient's illness correctly
- Assess own strengths and weaknesses in the implementation of the midwifery process
- Collaborate with members of the health team for provision of quality midwifery care
- Show confidentiality in managing patient's information

## **Clinical Placement:**

- Hospital/Health Centers (OPD, Wards, emergency room, intensive care units)
- Clinics
- Clinical skills laboratory

## **Clinical Skills:**

- Weighing
- Measuring height
- Measuring Blood Pressure
- Reading Pulse
- Assessing hearing
- Assessing visual acuity

- Assessing reflexes
- Documenting findings

### Assessment:

- Practical exams
- OSCE
- Reflective diary

### Resources:

- Sphygmomanometer and Stethoscope
- Tuning fork
- Ophthalmoscope
- Tongue Blade
- Tape line
- Snellen's chart
- Percussion hammer
- Height Board

### Competencies

Knowledge	Attitudes/Behaviors	Skills
Demonstrates knowledge of basic scientific methods and processes	Appreciates strengths and weaknesses of scientific bases for practice  Values the need for ethical conduct in practice and research	Critiques research for application to practice  Participates in data collection and other research activities
Understands the use and importance of data for improving practice	Values the importance of data to improve midwifery nursing care	Describes the computerized systems presently utilized to facilitate patient care
Describes how diverse cultural, ethnic, spiritual and socioeconomic backgrounds function as sources of patient, family, and community values	Describes how diverse cultural, ethnic, spiritual and socioeconomic backgrounds function as sources of patient, family, and community values	Implement care to meet holistic needs of patient socioeconomic cultural, ethnic and spiritual values and beliefs influencing health care and midwifery practice

**Semester V**

<b>Knowledge</b>	<b>Attitudes/Behaviors</b>	<b>Skills</b>
Describes scope of practice and roles of interdisciplinary and midwifery health care team members	Values the perspectives and expertise of all health team members	Functions competently within own scope of practice as a member of the health care team Assumes the role of team member or
Understands the use and importance of nursing data for improving midwifery practice	Values the importance of data to improve midwifery practice	Individually, or as a member of a group, uses information effectively to accomplish a specific purpose Uses information technology to enhance own knowledge

**Assessment:**

- Written Exams
- Case study
- Procedure evaluation
- Practical exam
- Clinical performance
- OSCE

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**Teaching/Learning Strategies:**

- Lectures
- Demonstrations
- Handbook assignments
- Handouts
- Illustrations
- Discussions
- Case reports

**Course Expectations:**

- The student is expected to:
- Regularly attend class and laboratory sessions
- Come to class prepared having completed all homework and reading assignments
- Participate actively in class and laboratory
- Complete all assignments and take examinations on due dates

**Instructional Materials:**

*Textbooks:*

*Handbook for Health Personnel in Rural Liberia*, 3rd Ed., 2009.with:  
10 diagnostic cards

Sample clinical test questions

*Nutrition for Developing Countries*, Felicity King, Maurice King, David Morley, Leslie Burgess, Ann Burgess.

**Assessment Criteria – Standard Grading System:**

Quizzes	15%
Assignments	15%
Attendance	5%
Mid-term Exam	25%
Final Exam	40%





# **Semester VI | Course Outline**

**Professional Development  
Workshop:**

**EmONC/BLSS**

**Family Planning Technology**

**Affiliation**

