

REPUBLIC OF SOUTH SUDAN



**NATIONAL CURRICULUM
FOR
DIPLOMA IN CLINICAL MEDICINE & PUBLIC HEALTH**

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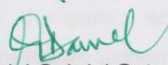
Sign:



Dr. Bhoka George Didi

**Country Director
AMREF in South Sudan**

Sign:



Dr. Daniel Gabriel Gatwech

**Director General for Training and
Professional Development, MoH, RSS.**

1.0 INTRODUCTION

1.1 Background information

The Republic of South Sudan has one of the severest shortage of major categories of health workers (doctors, nurses, clinical officers, midwives, pharmacy personnel and dental personnel) in the world; a ratio of less than 0.19 compared to the recommended World Health Organization of 2.3 (South Sudan National HRH Strategic Plan 2012-2016). This has resulted into low access to quality health care with user rates estimated at 0.2 contacts per person per year therefore compromising the provision of the Basic Package of Health Services (BPHS) and Essential Hospital Services as envisaged in the Health Sector Development Plan (2011-2015).

The low access to BPHS translates to heavy burden of disease resulting into poor health indicators especially for mothers and children. For example the under-five infant mortality rate is 135.3 per 1,000, whilst maternal mortality is the highest in the world at 2,054 per 100,000 live births (UN Report 2012). Preventable vector-borne diseases, acute respiratory infections and malnutrition are the main causes of morbidity and mortality particularly among vulnerable groups. The public health system is weak due to many years of civil war that affected not only physical infrastructure but also provision of medicines, equipment and other non-pharmaceutical supplies. In addition, there is weak regulatory system, quality assurance and inadequate number of trained human resources for health in South Sudan.

1.2 Rationale and Need for Review of the Curriculum

Training of clinical officers in the country is compounded by a number of challenges. A baseline survey conducted in February 2012 on the capacity of National Health Training Institute (NHTI) in Maridi that trains clinical officers and midwives highlights weaknesses in performance of clinical officers in surgery, obstetrics & gynecology and paediatrics. The survey recommends upgrading of skills of existing tutors through in-service training in order to gain competences in these areas. Further, the survey shows that health facilities used as placement sites are few with inadequate health workers for supervision during practicum and internship. A nationwide training needs assessment and tracer

study conducted in June 2012, for clinical officer graduates from the same institute indicates weaknesses in surgery, medicine, paediatrics, obstetrics & gynecology, communication, leadership and management, patient diagnosis and management, drug administration, and HIV/AIDS education. Both studies recommend provision of more but relevant books in the library, increase numbers and training of tutors in specialized disciplines as well as improve the learning environment i.e. physical infrastructure and equipment (Teaching hospital, ICT equipment, classrooms, library and dormitories). This revised curriculum, lastly reviewed in 2008, has taken into consideration new knowledge and health priorities of the sector and has updated relevant content and restructured the design of the curriculum to ensure that there is logical and sequential build up of competences in order to address gaps as highlighted in the February¹ and June² 2012 studies.

1.3 Vision and Mission of the Programme

1.3.1 Vision

Excellence in Clinical Officer training for quality and responsive health care

1.3.2 Mission

To produce Clinical Officers with relevant competencies for sustainable quality health service delivery in the Republic of South Sudan and beyond.

2.0 PROGRAMME AIM, OBJECTIVES AND CORE COMPETENCIES

2.1 Aim

The aim of the Diploma programme in Clinical Medicine and Public Health is to develop students' knowledge, skills and attitudes necessary for providing quality health care at all levels in the health sector in the Republic of South Sudan. The design and the content of the programme provide opportunities for students to develop prerequisite

¹ Baseline survey on assessment of Capacity of Maridi National Health Training Institute to train health workforce

² Training Needs Assessment and Tracer Study for Clinical Officer Graduates

competencies to provide clinical care, community service and leadership and management for strengthening the health care system.

2.2 Objectives

The programme will enable the graduate to achieve the following objectives at the end of the training period:

1. Apply professional skills in diagnosis and treatment of common diseases and conditions.
2. Participate in preventive, promotive and rehabilitative health care services in the community.
3. Teach and educate health workers and the community on relevant issues on health issues.
4. Work as a team member in the delivery of health services with other health workers and institutions.
5. Manage health services through application of various managerial and leadership skills.
6. Demonstrate positive and responsive attitudes, ethical and professional conduct in providing health care services to individuals, family and the community.
7. Undertake continuing professional development in order to maintain and acquire new knowledge and skills that are essential in the provision of health services.
8. Conduct innovative research for evidence and knowledge management.
9. Carry out resource mobilization for health service delivery

2.3 Core Competencies

The programme endeavors to inculcate the following core competences to learners to enable them carry out their professional roles as clinical officers.

- Applying scientific foundation of medicine and using clinical skills in health service delivery. This includes:
 - Using scientific knowledge to accurately diagnose and manage the care of patients in an efficient and effective way
 - Understanding of the principles underlying medical decisions and actions, and be able to adapt to changes in the medical field that affect the context of one's professional practice.

- Applying knowledge of population health and health systems. This includes:
 - Recognizing that a clinical officer not only focuses on understanding of how a given disease affects an individual and the diagnosis and management of that disease, but also gaining understanding of how global epidemics such as HIV/AIDS and the consequences of other social problems like smoking and violence affect health of populations. The clinical officer must work in teams with other health professionals to promote, maintain, and improve the health of a given population.
- Communicating in a credible and effective way. This includes:
 - Speaking and writing clearly, adapting communication style and content so they are appropriate to the needs of the intended audience
 - Encouraging others to share their views and takes to understand and consider others views
 - Keeping others informed of key and relevant issues
- Ensuring effective use of resources. This includes:
 - Prioritizing, identifying, organizing and effectively managing all resources including financial and human resources needed to achieve results
 - Fostering effective leadership, management and governance to mobilize and efficiently use available resources.
- Demonstrating professional values, attitudes, behaviour and ethics at all times. This includes:
 - Inculcating a value system and attitudes integrated around principles of sound moral character, accountability, transparency, fairness, equity in serving humanity.
- Fostering teamwork while respecting diversities. This includes:
 - Working collaboratively with team members to achieve results
 - Delegating work appropriately to staff, providing them with the necessary support to meet their objectives
- Managing information includes but not limited to:
 - Using modern communication and information technology to access and manage medical information and to ensure effective flow of knowledge and information to the rest of the health team.

- Understanding the limitations of information technology and using information for problem solving and decision-making.

3.0 PROGRAMME PHILOSOPHY, DURATION AND DESIGN

3.1 Programme Philosophy

The graduates of the programme will be expected to develop critical thinking, clinical reasoning and problem-solving skills in managing patients and also in providing services to the communities they shall serve at all levels. Through practice-based teaching and assessments, learners will be prepared to master the expected learning outcomes for the diploma programme.

3.2 Programme Duration

The programme is designed to take three academic years. However, a candidate may take a maximum of five academic years subject to the approval of the institute or examination board as stipulated in the rules governing the conduct of continuous assessment and final qualifying examinations.

3.2 Programme Design

The programme is designed around competencies that graduates should demonstrate upon completion of training. To achieve this the learning experiences are integrated through the teaching of computer and communication skills, basic biomedical sciences, social sciences and management, before being introduced to patho-physiology and clinical science courses. The social and biomedical courses are specifically for gaining understanding of concepts, principles and practices of medical disciplines and related areas that are covered in the programme as shown in the table below.

Courses
<p><i>Level 1</i></p> <p>Computer application skills, Communication skills, Social sciences and Biomedical sciences</p>
<p><i>Level 2</i></p> <p>Biomedical Sciences, Health Services management, Research proposal, Community attachment and Pathophysiology.</p>
<p><i>Level 3</i></p> <p>Clinical Sciences, research report writing and submission and rotations in health units and hospitals</p>

The three year programme will focus students on acquisition of knowledge, development of core competencies and skills for professional practice. These are essential in providing quality and effective health care services in hospitals, health units and in the community. The objectives and the required competencies for the community attachment in health units and hospitals are specified in Appendices I-V.

4.0 TARGET GROUP

The Programme is designed for secondary school leavers, mature candidates working in the public and private organizations and who may be required to provide health services in their organizations, and current health workers wishing to change their career to Clinical Medicine and Public Health.

5.0 ROLES AND RESPONSIBILITIES OF CLINICAL OFFICERS

Upon successful completion of the programme, Clinical Officers will be able to carry the following roles and responsibilities individually or in teams upon completion of the training.

Clinical duties include:

- Accurately diagnosing common health problems
- Appropriately managing common health problems in the health facility
- Accurately preparing drugs prescriptions for common health problems
- Accurately administering relevant treatment
- Appropriately counseling and managing patients/clients
- Appropriately identifying patient/clients that need referral and promptly making referrals
- Diligently carrying out minor surgical operations
- Appropriately identifying emergencies and referring them promptly
- Diligently conducting normal and abnormal deliveries and/or referring them promptly.

Community health duties include:

- Conducting community mobilization and sensitization
- Conducting immunization sessions at the health facility and outreaches
- Carrying out growth monitoring and promotion
- Conducting home visits
- Carrying out school health programmes

- Carrying out antenatal, natal and post natal services at the health facility and outreaches
- Providing reproductive health services at the health facility and community
- Carrying out information communication and education [IEC] on relevant health issues.
- Initiating and participating in environmental sanitation interventions
- Carrying out community diagnosis and disease surveillance
- Conducting research on relevant health issues.

Managerial duties include:

Upon successful completion of the programme, the Clinical Officer may be deployed in a hospital, training institution, county office among other units to perform the following duties.

- Identifying health priorities/needs in the catchment area
- Managing and providing leadership to establish, develop and strengthen health units through good governance and best practices
- Carrying out resource mobilization for the health unit.
- Preparing action plans and work schedules for the health facility
- Implementing planned services
- Monitoring and evaluating health service delivery at the health facility and in the community
- Conducting supportive supervision of fellow staff.
- Appraising staff in the health facility.
- Organizing and coordinating staff meetings.
- Training other staff and supervising health learners in practicum and internship.
- Carrying out performance management in the health facility
- Ensuring quality in health service delivery
- Initiating and promoting inter and intra-sectoral collaboration
- Decision making and communication

- Managing financial resources transparently
- Carrying out proper drug management
- Implementing the recommended Health Information management system in the unit,
- Carrying out advocacy and social mobilization in the community
- Compiling and submitting reports to relevant authorities regularly.
- Participating in health policy development and implementation
- Mobilizing and managing resources for effective health service delivery

Continuing Professional Development roles include:

- Participating in seminars, workshops, conferences for sharing information/best practices to strengthen the profession and health service delivery.
- Planning for and seeking or providing support (financial or otherwise) to enhance own career progression through continuing professional development (CPD) programs.
- Using available global/local health forums or networks to keep abreast with new knowledge, practice and research. This may be face to face or online.

6.0 TEACHING AND LEARNING METHODS

The programme is designed around a range of innovative and conventional (traditional) methods. The aim is to provide variety and stimulate learners in order to acquire relevant knowledge, technical/clinical skills and professional characteristics that are required in the practice of clinical medicine and public health in challenging environment in South Sudan. Teaching and learning for various courses will use a variety of teaching methods, taking into consideration the characteristics of the students. The teaching methods will include Brain storming, Case presentations, Clinical conferences and rotations, Computer Assisted teaching, Computer based teaching/Learning, Demonstrations and return demonstrations, Field attachments, Group discussions, Individual and group assignments, laboratory work, Modified Lectures, Observations and interviews in the wards, portfolios, Projects, Role plays/simulations, Self directed learning, Small group tutorials, Supervised practice, Video shows, Grand round, Ward

and theatre visits and rounds. The implementation of the programme will therefore focus on the application of principles of adult learning which include problem based learning.

7.0 TEACHING AND LEARNING AIDS

The programme design ensures use of various teaching and learning aids. These will include but not limited to Information Communication Technology (ICT) equipment, Textbooks and Manuals, Written handouts, Chalk board, White boards, Flip charts, Written Projects, Case scenarios, Manikins, Simulators, Anatomical models, Laboratory specimens, Hospital wards, Health centres, Clinics, Overhead projectors, PowerPoint slides, Video tapes/DVDs, MoH guidelines and other Policy Documents.

8.0 RESOURCES FOR THE PROGRAMME

Resources required to implement this curriculum include the following;

Human Resources:

A) Teaching Faculty

These shall comprise of: Principal, Deputy Principal, Academic Registrar/Master, Dean of Students, Health Tutors, Lecturers, Clinical instructors and ICT staff (Ratio of 1 Tutor to 15 students) to cater for various specialties/programmes offered.

B) Non-Teaching staff

Technical staff: These will comprise of; Administrator/HR manager, Librarian, Accountant/bursa, Logistician, Warden, Caterer, Drivers and Secretary.

Non-Technical staff: These comprise of Cooks, Cleaners, Guards, Night Watchmen.

C) Skills laboratory/Demonstration room - with adequate clinical, surgical and nursing equipment.

D) The library: The library should have adequate course and reference books/health learning materials as well as adequate reading space.

E) ICT Services with an equipped computer laboratory for training and internet access to supplement library services.

F) Accommodation

Classroom and office space: There should be adequate and equipped office space and classrooms for each programme.

G) Dormitories

Ideally all students should be residents in the institute. There should be catering services where possible. Where this is not possible students can be advised to stay and eat out but ensure that they participate in all teaching and learning activities of the institute.

H) Transport: There should be adequate transport facilities for the various administrative, teaching and learning activities of the institute.

I) Practicum sites

Every institute should have or be attached to a well equipped teaching hospital and health centres for clinical practice. In addition there should be good working and result-oriented relationship between the institute and the surrounding communities to facilitate community health activities.

9.0 ASSESSMENT OF STUDENTS

Students' performance in various course units will be assessed through;

- Continuous Assessment Tests [CATs],
- End of Semester Examinations and
- Final Qualifying Examinations.

9.1 Continuous Assessment Tests [CATs]

The Continuous Assessment will constitute 40% while the end of semester examination will constitute 60% of the final pass mark.

Each course unit will have a minimum of 2 CATs per semester which will contribute 40% of the pass mark for the semester. The CATs shall be administered during the course while covering the subject and at the end of the course unit.

Methods of administering CATs will be determined by the individual tutor, assigned hospital staff and the colleagues teaching the course unit. The type of CATs shall include Multiple Choice Questions (MCQs), Short essays, Long essays, Modified Essays, Objective Structured Clinical/Practical Examinations (OSCEs/OSPEs), projects, assignments, case studies, end of clinical rotation/attachment, community health attachment among others. The CATs shall be administered in classrooms, health facilities, field attachment, skills laboratory as the examiner deems appropriate.

9.2 End of Semester Examinations

The following shall guide the administration of end of semester examinations:

1. The examinations shall be set by the teaching staff and will cover the course objectives as well as content prescribed in the curriculum.
2. The examinations shall be moderated by the teaching staff with expertise and experience in the discipline/subject/course unit.
3. There shall be two papers set for each examination, which will be of the same scope and depth to take care emergency situations (e.g. leakage, accidents etc) that may necessitate setting another paper.
4. There shall be a marking scheme for each examination paper set.
5. The storage of examinations shall be under the custody of the Academic Master.
6. Candidates should be provided with examination cards bearing their index/examination numbers.
7. End of semester examination will contribute 60% of the pass mark for the semester.
8. End of semester Examination methods will vary according to discipline but will include written paper and practical/clinical and *vivas* where necessary.

NOTE:

- The pass mark for both CATs and end of semester examination will be 50% in each course.
- Assessment from Community attachment, clinical attachment/rotation will have 50% as pass mark based on a performance criterion/log book, as assessed by the supervisor.

9.2.1 End of Semester Assessment for First Year Students

- A student who fails more than 50% of the course units offered in the first semester will be DISCONTINUED from the programme immediately.
- A student who fails 50% or less of the course units will re-sit the failed subject in one week's time from the date of release of results.
- A student who fails any of the supplementary course units will be referred to repeat the semester with the class that follows.
- A student who fails any course unit when repeating a semester will automatically be discontinued from the programme.

Note: Students who are to re-sit supplementary examination should not go for end of semester recess/break. No student shall be allowed to the next semester without passing the supplementary examinations.

9.2.2 End of Semester Assessment of Second and Third year Students

- A student who fails more than 50% of the course units offered in a semester will repeat the semester with the class that follows.
- A student who fails 50% or less of the course units will re-sit the failed subjects in one week's time from the date of release of results.
- A student who fails any of the supplementary course unit will be referred to repeat the semester with the class that follows.
- A student who fails any course unit when repeating a semester will automatically be discontinued from the programme.

Note: Students who are to re-sit supplementary examination should not go for end of semester recess/break. No student shall be allowed to the next semester without passing the supplementary examinations.

9.3 Final Qualifying Examinations

The Final Qualifying Examinations will consist of the following;

- a) Five written papers
- b) Practicals in all course units covered in the programme.
- c) A written research project

Written papers will be administered as illustrated in the table below.

Written Papers	Time
Medicine	3 hours
Surgery	3 hours
Paediatrics	3 hours
Obstetrics and Gynaecology	3 hours
Public Health	3 hours

Practical/clinical examinations will be administered as illustrated in the table below:

Practicals (Traditional assessment method)	Time
Medicine	30 mins
Surgery	30 mins
Paediatrics	30 mins
Obstetrics and Gynaecology	30 mins
Public Health	30 mins

Health system research is a stand-alone paper and should be passed before graduation.

NOTE:

1. For OSPE/OSCE, each course unit will have a minimum of 4 stations and each will take at least 5 minutes duration (20 Minutes per course unit).
2. The pass mark for each theory paper will be 50% and will consist of the following;
 - Multiple choice questions [MCQs]
 - Short essay questions
 - Modified essay questions.
 - Long essay questions
3. Clinical/practical examination will consist of a variety of methods depending on the available resources but will include;
 - The traditional long case and short case type of examination in the ward.
 - Objective Structured Clinical Examination [OSCE] or Objective Structured Practical Examination [OSPE] type of examination.
4. The pass mark for clinical/practical examinations in every course unit will be 50% and will be independent of the theory paper.

9.3.1 Setting and marking of final Qualifying Examinations

- The examinations shall be set, moderated and marked by the Examination Board of the MoH Republic of South Sudan.
- The participating institutions should submit sample questions with their marking scheme at least three months before the examination moderation time.
- There should be two sets of examination papers per course unit with the same scope and depth for emergency reasons (e.g. leakage, accidents etc).

9.4 Grading of Marks

Grading of marks for CATs, End of Semester and Final Qualifying Examinations should be as follows;

- Score of 75% and above is a Distinction [A]
- Score of 65-74% is a Credit [B]
- Score of 50-64 is a Pass [C]
- Score of 49% and below is Fail [F].

9.5. Examination Rules and Regulations for final qualifying examinations.

- A candidate who fails in clinical/practical examination but has passed the theory paper will be required to re-sit the clinical/practical examination only, after a period of six months from the date of release of results.
- A candidate who fails theory paper but has passed the clinical/practical examination will be required to re-sit the theory examination only after six months from the date of release of results.
- A candidate who fails both theory and clinical/practical examination will be required to re-sit both theory and clinical/practical examinations after three months from the date of release of results.
- A candidate who fails more than 50% of the course units sat will be referred to re-sit all course units with the class which follows.
- A candidate who fails 50% or less of the course units sat for will be required to re-sit those course units after three months from the date of release of results.

- A re-sitting candidate can attend theory and clinical/practical sessions of the failed course units within the three months period.
- A candidate who fails any course unit after re-sitting at three months period will be referred to repeat all the course units of the final semester with the class which follows.
- A candidate who fails any course unit when repeating the final semester will automatically be discontinued from the programme.
- A score of 47-49% in one theory paper can be condoned by borrowing some marks from a related subject to reach a pass mark of 50%.
- Marks from clinical/practical examination cannot be borrowed to compensate for theory examination and vice versa.
- Theory paper results should be considered independent of the clinical/practical examination and vice versa. Average of the two scores will not apply.
- There shall be strict invigilation to check examination malpractice like, carrying written materials into the examination hall, assistance from fellow student or any other person, impersonation etc.
- Any candidate or staff found or proved having committed an examination malpractice will be expelled from the programme.
- Electronic gadgets like mobile phones, computers, iPads are not accepted in the examination room. Any student found with above gadgets will be disqualified from the examination. Only calculators shall be allowed in the examination hall.
- Any leakage of examination shall be reported to the Principal Tutor who will give direction for disciplinary action to be taken as prescribed above.
- Any evidence of leakage of an examination will require all the candidates to sit an emergency paper.
- Candidates must enter the examination room at least 15 minutes before start of the examination. A student coming late for examination will not be accepted to sit the examination.
- Any examination script found without examination index number will not be marked.

- Candidates must have school identification cards in order to be accepted in examination room.

10.0 ADMISSION REQUIREMENTS

10.1 General Requirements

The Ministry of Health, Republic of South Sudan, in collaboration with the other relevant training institutions, development partners, and donor agencies will conduct interviews and selection of candidates. However, candidates to be admitted to this programme shall be expected to meet the following minimum requirements:

1. Be a citizen of South Sudan or any other country permitted by the Government of the Republic of South Sudan
2. Must not be more than 35 years of age.
3. Must be willing to undergo an entry test to assess literacy and comprehension skills in English language as well as in mathematics before admission.
4. Candidates must be willing to be screened for medical fitness during interview and on admission.

10.2 Minimum Requirements for South Sudan Candidates

Must be holder of Republic of South Sudan certificate of Secondary Education with:

- a) An average of 60% pass in Biology and Chemistry and either (Physics or Maths)
- b) And a pass in English language.

10.3 Minimum Requirements for Candidates from other Countries

Candidates from other Countries shall meet special admission criteria regarding tuition fee, as will be stipulated by the Government of the Republic of South Sudan but must meet the following criteria:

10.3.1 Candidates from Kenya

Be holder of Kenyan Certificate of Secondary Education with C+ (or credit for EACE holders) in:

- a) Biology and Chemistry and either (Physics or Maths)
- b) And a pass in English.

10.3.1 Candidates from Uganda

Be holder of Ugandan Certificate of Secondary Education with a mean grade of credit in:

- a) Biology and Chemistry and either (Physics or Maths)
- b) And a pass in English.

10.3.1 Candidates from Ethiopia

Be holder of Ethiopian Certificate of Secondary Education grade 10 with C in:

- a) Biology and Chemistry and either (Physics or Maths)
- b) And a pass in English.

11.0 THE AWARD OF DIPLOMA

The Diploma in Clinical Medicine and Public Health will be awarded by the Ministry of Health, Republic of South Sudan, to candidates who successfully complete the prescribed course units and assessments in the programme and have been certified by the MoH Board of Examiners to have passed final qualifying examinations.

12.0 CURRICULUM MONITORING AND EVALUATION

12.1 Monitoring

The purpose of monitoring is to improve and optimize implementation of the curriculum for efficiency and effectiveness in order to meet programme aims and objectives. The MoH Republic of South Sudan shall appoint a curriculum committee with specific role of monitoring completion of course units as stipulated in the curriculum. The Committee

shall develop monitoring tools to track achievement of course objectives through student pass rate in end of semester, end of year and qualifying exams. The Curriculum committee shall also monitor changes in the health sector requiring updating of tutors with new skills and knowledge for immediate action in order to impact curriculum's relevance.

12.2 Evaluation and Review

There will be a stakeholder involvement for short and mid-term evaluation to assess the impact of the curriculum in meeting community health needs, changes in medical science and health care delivery systems. The evaluation and review will include monthly, quarterly and annual progress reports. Performance in end-of-semester and end of year as well as final examination reports will form additional measurement indicators. A multi-stakeholder engagement and involvement shall be useful in evaluating performance of graduates in health service delivery and their impact in improving health outcomes in the sector. Curriculum review shall be carried out after a minimum of three-year period to assess its impact, effectiveness, and relevance in addressing the health care needs of the community.

13.0 PROGRAMME STRUCTURE AND ORGANIZATION

The programme is structured in courses that are logically and sequentially organized to take three academic years. Each year is divided into two semesters each lasting 22 weeks of learning and teaching as shown in table 3 below.

Table 3: Programme Structure for the Three Years

	YEAR 1	Total	Practical	Total
	Semester 1 [22 weeks]	358	302	660 hours
1	COMPUTER APPLICATION SKILLS	15	30	45
2	COMMUNICATION SKILLS	15	30	45
3	NURSING I.	44	30	74
4	ANATOMY & PHYSIOLOGY I	60	40	100
5	FIRST AID	20	40	60
6	SOCIO-PSYCHOLOGY	44	22	66
7	NUTRITION	20	40	60
8	PROFESSIONAL ETHICS, CODE OF CONDUCT AND MEDICO-LEGAL ISSUES	20	10	30
9.	PHC/CBHC	40	20	60
	CATS and End of semester Exams	80	40	120
	Recess [2 weeks]			
	Year I Semester 2 [20 weeks]	351	249	600 hours
1.	ANATOMY & PHYSIOLOGY II	55	40	95
2.	NURSING II	22	44	66
3.	MICROBIOLOGY I	30	15	45
4	ENVIRONMENTAL HEALTH I	40	20	60
5	MCH/FP	30	40	70
6	COMMUNICABLE DISEASES	80	20	100
7	PHARMACOLOGY I	34	10	44
	CATS and End of semester Exams	60	60	120
	December Holidays [4 weeks]			

	YEAR 2	Theory	Practical	Total
	Semester 1 [22weeks]	278	382	660 hours
1.	PHARMACOLOGY II	58	68	126
2.	HEALTH SERVICES MANAGEMENT	60	30	90
3.	MENTAL HEALTH	60	50	110
4.	ENVIRONMENTAL HEALTH 2	10	40	50
5.	COMMUNITY ATTACHMENT	0	120	120
6.	PATHOLOGY	30	24	54
7.	MICROBIOLOGY 2	20	30	50
	CATS and End of semester Exams	40	20	60
	Recess [2 weeks]			60
	Year 2 Semester 2 [22weeks]	310	290	600 hours
1.	EPIDEMIOLOGY AND BIostatISTICS	40	20	60
2.	OPHTHALMOLOGY	20	30	50
3.	ENT	15	30	45
4.	ROTATION IN SPECIAL CLINICS	40	80	120
5.	MEDICINE I	40	20	60
6.	SURGERY I	35	25	60
7.	PEADIATRICS I	30	20	50
8.	OBS/GYN I	40	20	60
9.	Health Systems Research I (HSR I)	10	25	35
	CATS and End of semester Exams	40	20	60
	December Holidays (4weeks)			

	YEAR 3	Theory	Practical	Total
	Semester 1 [22 weeks]	333	327	660 hours
	Courses			
1.	SURGERY II	74	40	114
2.	PAEDIATRICS II	61	40	101
3.	OBS & GYN II	51	40	91
4.	MEDICINE II	51	40	91
5.	PUBLIC HEALTH	16	32	48
6.	HEALTH SYSTEMS RESEARCH II	10	25	35
7.	CLINICAL ROTATION I	40	80	120
	CATS and End of Semester Exams	30	30	60
	Recess (2 weeks)			
	Year 3 Semester 2	100	500	600 hours
1.	CLINICAL ATTACHMENT IN HEALTH UNITS	0	120	120
2.	CLINICAL ATTACHMENT IN HOSPITAL	0	240	240
3.	CLINICAL ROTATION II	40	80	120
	REVISION	30	30	60
	QUALIFYING EXAMINATIONS	30	30	60

Summary: Distribution of theory to practical hours

Theory	1730
Practicals	2050
Total hours	3780

NB: More practical exposure for graduates of this programme will be gained through compulsory internship of 12 months [3months in each major clinical discipline] in recommended hospitals.

This internship is pre-requisite for registration with the MoH RSS for employment.

14.0 COURSE DESCRIPTIONS

The programme is designed to cover 27 course units [subjects] during the three-year duration. The structure of each course unit will follow a sequence of description of the purpose, objectives, contents and learning experiences. The objectives cover cognitive, psycho motor and affective domains in all the courses that are offered in the program. Competencies that are required of the graduates are identified for each of the courses at different years of training. The competencies include all professional qualities in the practice of clinical medicine and public health.

YEAR 1 SEMESTER 1

COMPUTER OPERATION SKILLS

45 hours (Theory 15 hrs Practical 30hrs)

Purpose

To equip the learner with the basic knowledge and skills in information communication technology (ICT).

Objectives

By the end of this course unit, the learner should be able to:

1. Describe the concepts of computer
2. Demonstrate ability to use Microsoft Windows
3. Demonstrate ability to use Microsoft Word
4. Demonstrate ability to use Microsoft PowerPoint
5. Demonstrate ability to use Microsoft excel
6. Demonstrate ability to use the Internet
7. Demonstrate ability to Setup e-Mail addresses and use e-Mail
8. Demonstrate ability to use Search Engines

Content

Introduction to computers: Microsoft Windows, Microsoft Word, Microsoft PowerPoint, Microsoft excel, Internet, Setting up e-Mail addresses and e-Mail usage, using Search Engines.

Learning experiences

Lectures, Computer Laboratory, Practical Sessions, Demonstrations and return demonstrations, group and individual assignments

Teaching and Learning Resources

Computers, Internet services, Tutors, Textbooks, Training manuals, Handouts, Computer laboratory

References

1. David Reed, 2004, A Balanced introduction to Computer Science, Omaha, California.
2. David Moursund, 2007, A College Student Guide to Computers in Education, Oregon, USA.

YEAR 1 SEMESTER 1

COMMUNICATION SKILLS

45 hours (Theory 15 hrs Practical 30hrs)

Purpose

To enable the /learner to develop appropriate communication skills that are required in the management of patient and also in working with health teams and communities.

Learning Objectives

By the end of this course unit, the learner should be able to “

1. Explain the importance of communication.
2. Explain the process of communication.
3. Describe various media of communication.
4. Demonstrate ability to write letters, reports, and minutes.
5. Demonstrate ability to create rapport with patients, take history, conduct physical examination and give feedback to the patients through appropriate communication mechanism.
6. Apply knowledge and skills in counseling and educating patients and their families on health issues.
7. Demonstrate ability to communicate with patients and members of the community when breaking difficult or bad news.
8. Demonstrate ability to use communication skills in the practice of clinical medicine.

Content

Meaning and role of communications, role of health communications, the process of communications, principles of effective communications, summary writing, forms of business correspondence, meetings, interview, reports, oral/verbal communications, non-verbal communication, Audio and audio-visual communication, technology in communication, therapeutic communications, emerging trends in health communication, communications for health development and Health promotion. Techniques of breaking bad news.

Teaching Methodology

Lecture, observations, write-ups, role-plays, small group discussions, demonstrations, clinical conference, patients' interviews in the wards and simulations/role plays in class.

Teaching and Learning Resources

Telephone, Computer, Tutors, Textbooks, Chalk board, Radio, Television, video, Written letters, peers

References

1. Communicating to manage health and illness, by Dale E. Brushers & Daena Goldsmith.
2. Rout ledge Handbook of Applied Communication Research, by Lawrence R.Fray
3. Modified message and public health by Amy Sorclan, Dale Kunkel
4. Communication as comfort, By Sandra L. Ragan,
5. Health communication in practice, By Berlim Ray

YEAR 1 SEMESTER 1

NURSING I

66 hours (Theory 44 hrs/Practical 22 hrs)

Purpose

The purpose of the course is to equip the learner with competencies that are required in providing quality nursing care to different categories of patients in different situations. The skills are part of early clinical exposure of students in their preparation to undertake clinical courses in the hospitals and the community.

Objectives

1. Describe the history, principles and practice of nursing.
2. Explain nursing procedures.
3. Demonstrate the ability to maintain the ward/ facility environment clean
4. Outline equipment and materials used in a health facility.
5. Demonstrate ability to care and manage health facility equipment and materials
6. Demonstrate the ability to carry out various nursing procedures.

Content

History of nursing, general cleanliness of the ward/facility, economy of food, drugs, sundries, cleaning materials and routine ward work, bed making, admission and discharge procedures, Positions used in nursing, vital observations, maintaining patients personal hygiene and comfort, preparing patients for various examinations, drug administration, pre and post operative, septic technique,

Learning Experiences

Lectures, group discussions, role-plays, demonstrations, supervised practice, clinical conference, simulations.

Teaching and Learning Resources

Textbooks, Manuals, Manikins, Skills laboratory, Diagnostic equipment, Nursing equipment, Drug samples, Patients.

References

1. Monica Tellersell, Joan Swawyer and Christopher Sallisbury (1992): Handbook of Practice Nursing. Churchill Livingstone (London).
2. Martha I. P. Macleod (1999): Practice Nursing Becoming experienced. Churchill Livingstone (London)
3. Irene Hedgewood Jones (1990): The Nursing Code: A practical approach to the code of professional conduct. MacMillan (London).
4. I and E. Thompson, Kath M. Melia and Kenneth M. Boyd (1994). Nursing Ethics. Churchill Livingstone (London).
5. Helen Yura, Mary B. Walsh (1988): the Nursing Process: Assessing, Planning, Implementing, Evaluating. Appleton & Lange Connectant USA.
6. Oliver C. A. McNeil (1989): Procedure Manual for Nurses/Midwives AMREF.
7. L. B. Curzon (1990): Teaching in Further Education: An outline of principles and practice. Cassell Educational Ltd.
8. Anne G. Perry & Patricia A. Potter. Clinical Nursing Skills and Techniques 2nd Edition.
9. Ellis, J. R. & Hartley C. L. Nursing in Today's World: Challenges, Issues and Trends.

YEAR 1 SEMESTER 1

ANATOMY AND PHYSIOLOGY I

Total 100 hrs (60 hrs for theory & 40 hrs for practice)

Purpose

The purpose of this course unit is to enable the students to acquire knowledge about the body structures and their functions in the practice of clinical medicine. The focus will be on normal structures and functions of the body. The knowledge will also be useful in understanding diagnosis and management of patients with various health problems.

Objectives

By the end of this course unit a learner should be able to;

1. Explain the relationship between anatomy and physiology.
2. Explain the various anatomical terms
3. Describe the human cell and the various organelles
4. Describe the fundamental tissues of the body
5. Describe the normal structures and functions of the skeletal; muscular, respiratory, digestive and urinary systems.

Content

Introduction to the body as a whole: Definition of anatomy and physiology, anatomical position, anatomical terminology, anatomical land marks, body cavities, cells, tissues, organs and systems, body fluids, electrolytes, homeostasis.

Skeletal system; bone tissue, bone development, types of bones, axial skeleton, appendicular skeleton, fractures and bone healing

Joints; definition, types of joints, movement at joints

Muscular system: Muscle tissue, types of muscles, functions of muscles, muscles of facial expression, muscles of the neck, muscles which move the various joints, muscles of the back, chest wall, abdominal wall and pelvic floor.

Respiratory system: Structures of the respiratory system and their functions, mechanism of respiration, internal and external respiration, control of respiration.

Digestive system: Structures of the digestive system and their functions, peristalsis, physical and chemical digestion, accessory structures of the digestive system and their functions.

Urinary system; The main structures of the urinary system and their functions, urine formation, factors influencing urine production, normal constituents of urine, abnormal constituents of urine, accessory structures of the urinary system.

Learning Experiences

Modified lectures, demonstrations, small group discussions, case studies, role-plays, simulations, individualized assignments, video shows.

Teaching and Learning Resources

Textbooks, Anatomic models, Manikins, Computer and LCD projectors, Chalk boards, Chart stands, Handouts

References

1. Anatomy and Physiology in Health and illness by Ross and Wilson, Edition 11, 2010, Toronto University, Canada
2. Textbook of Anatomy and Physiology by Harley, Carola and Noback Edition 1994, Mosby
3. Structure and Function in Man by Jacob Francone Lassow, 5th Edition 2010

YEAR I SEMESTER 1

FIRST AID

60 hours (Theory 20hrs and Practical 40hrs)

Purpose

The purpose of the course is to provide the learner with competences that are required in providing First Aid to casualties in different situations. The competences are part of early clinical exposure of students in their preparation to undertake clinical courses in the hospitals and the community.

Objectives

1. Outline the importance of first aid management.
2. Mention the principles of first aid management
3. Outline equipment and materials used in First Aid.
4. Describe the general treatment of First Aid.
5. State the various situations requiring First Aid.
6. Demonstrate ability to conduct First Aid Procedures to various categories of casualties.

Content

Introduction to first aid: Definition of first aid, importance and principles of first aid management), equipment and materials used in First Aid, general treatment of first aid (Maintaining Air way, Breathing, Circulation using artificial respiration, external chest compression and cardio pulmonary resuscitation), Asphyxia (electrocution, drowning, gas poisoning, asthma), Chest injuries/pneumothorax, pulse point, hemorrhage, shock, fainting, burns, wounds and contusions, fractures, dislocations, strains and sprains, loss of consciousness, poisoning, bites and stings, foreign bodies, dressing, bandaging and methods of lifting casualties.

Learning Experiences

Lectures, small group discussions, observation, demonstrations, supervised practice, individual assignments, role-plays, clinical conference, simulations.

Teaching and Learning Resources

Slings, manikins, stretchers, peers, bandages, blankets, linen.

References

1. Red Cross first aid manual step by step guide. 2009th edition. Published 3rd august.
2. First Aid text book by Beillieres (6th Edition)
3. First Aid Manual - St. Johns Ambulance
4. Foundation of Nursing and First Aid by Rose & Wilson.

YEAR 1 SEMESTER 1

SOCIAL-PSYCHOLOGY

66 hours (Theory 44 hrs Practical 22hrs)

Purpose

To enable the learner to acquire knowledge and skills in social psychology that are essential in the practice of clinical medicine. The course will further focus on social issues including human behaviour, culture and norms that influence the delivery of health care services in communities.

Objectives

By the end of this course unit; the learner should be able to:

1. State the concepts of social psychology
2. Explain common terminologies used in social psychology
3. Explain the importance of social psychology in health
4. Describe human development from conception to death
5. Explain the processes of human learning
6. Describe the personality development
7. Explain the socialization process.
8. Describe the role of attitude in shaping human behavior.
9. Explain individual and community reactions to health and illness.
10. Explain inter relationship between socio-economic factors and health.
11. Demonstrate ability of counseling clients and patients.

Content

Concepts of social psychology, common terminologies used in social psychology, importance of social psychology in health, human development from conception to death, processes of human learning, personality development, socialization process, role of attitude in shaping human behavior, individual and community reactions to health and illness, inter relationship between socio-economic factors and health, ability of counseling clients and patients.

Teaching Methodology

Lectures, group discussions, role-plays, assignments, case analysis and presentations, video shows.

Teaching and Learning Resources

Textbook, Chalkboard, Module, Handouts

References

1. Moscovici, S., Markova, I., 2006. The Making of Modern Social Psychology
2. Social Psychology by Kassin, Saul; Fein, Steven; Markus, Hazel Rose, 2008.
3. Moskowitz, Gordon, B., 2005. Social Cognition: Understanding Self and Others.
4. Davis, 2007. The Gregarious Brain "Dobbs".
5. David, G., Myers, 2007. Psychology Worth. 8th edition.
6. Cialdini, R., B., 2000. Influence: Science and Practice.
7. Anderson, Craig, 2003. The Sage Handbook of Social Psychology.
8. Reicher, S., Haslam, S., A., 2006. Rethinking the psychology of tyranny.
9. Carr Alan, 2006. The Handbook of Child and Adolescent Clinical Psychology. 2nd Edition. Routledge, London, UK.

YEAR 1 SEMESTER 1

NUTRITION

Total 60 hours (Theory for 20hrs 40 hrs for Practical)

Purpose

The purpose of this course unit is to enable the learner to acquire essential knowledge and skills in nutrition in order to educate communities on proper nutrition for various vulnerable groups. The course will also focus on acquisition of knowledge which is useful in advising the communities on how to manage nutritional disorders..

Objectives

By the end of this course unit a learner should be able to;

1. Explain the terms and concepts used in nutrition.
2. Outline basic requirements in balanced diet and their sources
3. Explain the importance of a balanced diet.
4. Identify symptoms and signs of various nutritional deficiencies.
5. Explain the importance of food hygiene, preservation and storage.
6. Explain the importance of breast feeding
7. Describe the process of weaning.
8. Advise the community on proper nutrition, causes and consequences of malnutrition.
9. Participate in the management of vulnerable groups e.g. children and mothers suffering from malnutrition and nutrition deficiency diseases.

Content

Terminologies and concepts of nutrition;, Basic requirements in human diet- (carbohydrates, lipids, protein, minerals, roughage, water, and vitamins, local foods and their nutrition values).Importance of balanced diet, Symptoms and signs of nutritional deficiencies. Importance of proper food hygiene preservation and storage, Importance of breast-feeding and process of weaning, factors that influence normal nutrition, causes of malnutrition, nutrition for special conditions.

Learning Experiences

Modified lectures, small group discussions, demonstrations, field visits, supervised practice attachment to nutritional units. Group and individualised assignments.

Teaching and Learning Resources

Textbooks and manuals on Nutrition, Food samples, Food supplements, Nutritional clinics or rehabilitation units, Weighing scales, Height measuring tapes or Boards, MUAC tapes, Standard weight and height charts, Measuring utensils.

References

1. Community Nutrition for Eastern Africa by Ann Burgess, Edition 1994
2. Child health Manual by AMREF 3rd Edition, 2006
3. WHO Pocket Book of Hospital Care for Children 1st Edition 2007
4. WHO Management of the Child with a Serious Infection or
5. Severe Malnutrition, 1st Edition 2000
6. IMCI Chart booklets and charts
7. IMCI videos

YEAR I SEMESTER I

PROFESSIONAL ETHICS AND CODE OF CONDUCT

30 hrs (Theory 20 hrs Practical 10hrs)

Purpose

To enable the learner to develop appropriate Medical professional ethics and code of conduct that are required in the Medical profession and management of patient and also in working with health teams and communities.

The medical professional ethics and code of conduct is developed primarily for the benefit of the patient. As a member of this profession, a health personnel must recognize his/her responsibility to patient as well as to society and to other health professionals..

Objectives

By the end of this course unit; the learner should be able to:

1. Describe the concepts of professional ethics and code of conduct.
2. Explain the principles of medical ethics
3. Demonstrate ability to apply medical ethics and code of conduct
4. Demonstrate ability to deal and comply with medical legal aspects.
5. Demonstrate ability to break sad news to clients, patients, staff and the communities.
6. Recognize and respect the rights of clients and patients.

Content

Concepts and theories of professional ethics and code of conduct, Principles of medical ethics, rules arising from medical ethics, values, dignity, ethical dilemmas, human rights in medical practice, common medical legal conditions and procedures, medical legal network cycle.

Teaching methodology

Lecture, observations, role-plays, group discussions, demonstrations, invite and visits to law enforcement agencies and hospital and case study.

Teaching and Learning Resources

Tutor, Textbooks, Modules, Handouts, Resource person (law enforcement officer), Police forms.

References

Sara Fry, Robert Veatch, Carol Taylor, 2001, Case Studies in Nursing Ethics, 4th Edition, Jones and Bartlett Learning, London, UK.

YEAR 1 SEMESTER 1

PRIMARY HEALTH CARE AND COMMUNITY BASED HEALTH CARE

60 hrs (Theory 40 hrs Practical 20hrs)

Purpose

The purpose of the course is to enable the learner to acquire knowledge and skills in the process of conducting community diagnosis, planning, implementing and monitoring various primary health care strategies in the communities for the improvement of health care services. The course will focus on concepts, principles and practices in primary health care activities.

Objectives

At the end of the course unit, the learner shall be able to:

1. Explain the concept of PHC and CBHC.
2. Explain the main characteristics of PHC
3. Describe the components of PHC
4. Identify the pillars of PHC
5. Explain the PHC planning Cycle
6. Explain the differences and similarities between PHC & CBHC
7. Describe the levels at which PHC activities are carried out.
8. Describe the common health problems and health related problems in the community.
9. Explain the need for integrating various health services within PHC/CBHC.
10. Identify community resource persons to manage their resources.
11. Demonstrate ability to train community own resource persons in management of resources
12. Describe the common operational problems in implementing PHC and CBHC.
13. Describe the role of a Clinical Officer in PHC/CBHC.
14. Describe the role of traditional healers in the community.
15. Demonstrate ability to conduct community diagnosis
16. Demonstrate ability to identify health education needs in the community.

17. Demonstrate ability to plan, implement and evaluate health education programmes in the community.
18. Demonstrate ability to mobilize communities to take responsibility on their own health using different
19. Participate in implementing and evaluation of primary health care activities in the community
20. Demonstrate ability to give feedback to the community on identified health problems and formulate appropriate strategies to deal with them.

Content

Definition of primary health care and community-based health care, Elements of PHC, pillars of PHC- (political commitment, full community participation, appropriate technology, inter-sectoral collaboration). Organizational levels for PHC (national, State, County, rural health facility and community levels). PHC planning Cycle, Role of CBHC and its implementation. Partners in PHC/CBHC (community resource persons, traditional healers, TBAs). Guide in Selection of community own resource persons, train community own resource persons, Community needs assessment, Community diagnosis and analysis, community mobilization, requirements and implementation strategies. Role of clinical officers and other community opinion leaders e.g. traditional healers.

Learning Experiences

Lectures, group discussions, community field visits, seminars, observation, supervised practices, role-plays, demonstrations, analysis and presentation of case studies.

Teaching and Learning Resources

Community own resource persons, peers, tutors

Reference Books

1. Wooding, N., Nagaddya, T., Nakaggwa, F., 2012. Primary health Care in East Africa. For how long shall countries run after diseases. Fountain Publishers, Kampala, Uganda.
2. Chris Wood., 2008. Community Health. 3rd Edition. AMREF, Nairobi, Kenya.

YEAR 1 SEMESTER 2

ANATOMY AND PHYSIOLOGY II

95 hours (55 hrs for Theory 40 hrs for Practical)

Purpose

The purpose of this course unit is to enable the learner to acquire in-depth knowledge and skills in the structure and functions of the various body systems.

Objectives

By the end of this course unit a learner should be able to describe the normal structure and functions of the following systems; blood, cardiovascular system, reproductive system, nervous system, special senses, and endocrine system.

Content

Blood; Composition of blood, functions blood, functions of blood cells [erythrocytes, leucocytes and thrombocytes], haemostasis and blood groups

Cardiovascular system

Blood circulatory system; Heart and blood vessels, blood pressure, pulse, pulmonary, systemic and foetal circulation.

Lymphatic system; Structures of the lymphatic system and their functions

Nervous system:

Nervous tissue, components of the central nervous system [brain, spinal cord], components of the peripheral nervous system [cranial nerves, spinal nerves, autonomic nervous system], their structure and functions

Special senses: anatomy and functions of eye, ear, tongue, nose and skin.

Endocrine System: Location, structures and functions of endocrine glands [hypothalamus, pituitary, thyroid, parathyroid, thymus supra-renal, pancreas, pineal and gonads].

Reproductive system: anatomy and functions of the male reproductive system, anatomy and functions of the female reproductive system including anatomy of pelvis, mammary glands and menstrual cycle.

Learning Experiences

Modified lectures, demonstrations, small groups discussions, case studies, role-plays, simulations, individualized assignments, video shows.

Teaching and Learning Resources

Textbooks, Anatomic models, Manikins, Computer and LCD projectors, Chalk boards, Chart stands, Handouts,

References

1. Anatomy and Physiology in Health and illness by Ross and Wilson, Edition 11, 2010, Toronto University, Canada
2. Textbook of Anatomy and Physiology by Harley, Carola and Noback Edition 1994, Mosby
3. Structure and Function in Man by Jacob Francone Lassow, 5th Edition 2010

YEAR 1 SEMESTER 2

NURSING II

66 hours (Theory 22 hrs/Practical 44 hrs)

Purpose

The purpose of the course is to equip the learner with competencies that are required in providing quality nursing care to different categories of patients in different situations.

Learning objectives

By the end of this course unit a learner should be able to;

1. Carry out barrier nursing appropriately
2. Demonstrate ability to collect, care for specimens from the patients.
3. Demonstrate ability to care for equipment and supplies appropriately
4. Demonstrate ability to use universal precautions for infection prevention and control.
5. Care for the dying and the dead in the health facility.
6. Demonstrate ability to make the patients/clients and relatives comfortable during bereavement.
7. Demonstrate ability to write reports on patients and hand over a ward/health facility.

Content

Barrier nursing, collection, storage and transport of specimens, care of equipment and supplies, care of the dying and the dead, ward/clinic management, writing of ward reports and Universal precautions for infection prevention and control.

Learning Experiences

Lectures, group discussions, role-plays, demonstrations, supervised practice, clinical conference, simulations.

Teaching and Learning Resources

Textbooks, Manuals, Manikins, Skills laboratory, Diagnostic equipment, Nursing equipment, Drug samples, Patients,

References

1. Monica Tellersell, Joan Swawyer and Christopher Sallisbury (1992): Handbook of Practice Nursing. Churchill Livingstone (London).
2. Martha I. P. Macleod (199): Practice Nursing Becoming experienced. Churchill Livingstone (London)
3. Irene Hegwood Jones (1990): The Nurbe is Code A practical approach to the code of professional conduct. MacMillan (London).
4. I and E. Thompson, Kath M. Melia and Kenneth M. Boyd (1994). Nursing Ethics. Churchill Livingstone (London).
5. Helen Yura, Mary B. Walsh (1988): the Nursing Process: Assessing, Planning, Implementing, Evaluating. Appleton & Lange Connectant USA.
6. Oliver C. A. McNeil (1989): Procedure Manual for Nurses/Midwives AMREF.
7. L. B. Curzon (1990): Teaching in Further Education: An outline of principles and practice. Cassell Educational Ltd.
8. Anne G. Perry & Patricia A. Potter. Clinical Nursing Skills and Techniques 2nd Edition.
9. Ellis, J. R. & Hartley C. L. Nursing in Today's World: Challenges, Issues and Trends.

YEAR 1 SEMESTER 2

MICROBIOLOGY I

45 hours (Theory 30hrs/Practical 15hrs)

Purpose

The purpose of the course is to enable the learner to acquire knowledge and skills and professional qualities in managing various disease conditions. The knowledge and skills are essential in diagnosis and management of patients with a variety of health problems.

Learning Objectives

1. Explain the concept and terminologies in microbiology.
2. Outline the major classifications in microbiology.
3. Describe the different types of microorganism and their characteristics.
4. Describe the morphology and pathogenesis of micro-organism
5. Explain the mode of transmission of infections.
6. Explain the host defense mechanisms for the control of diseases.

Content

Concepts of microbiology: Classification of microbiology, (Bacteriology, Virology, Entomology) Type and characteristic: Gram positive, Gram negative Cocci, morphology, pathogenesis,

Mode of transmission: (air borne, feoco-oral, direct contact, blood transfusion, sexual intercourse, inoculation, trans-placental) host defense and control of diseases (Natural and acquired/artificial immunity)

Learning Experiences

Lectures, supervised laboratory practice, Observation, demonstrations, small group discussions,

Teaching and Learning Resources

Lab instruments e.g. Microscope, Lab supplies, teaching and learning slides, Reagent, simulators, stabilizers Quality control devices

REFERENCES

1. Standard Operating Procedure for Essential Laboratory Tests, AMREF on behalf of MOH Kenya, Tanzania, Zanzibar and Uganda (2008)
2. A Practical Laboratory Manual for Health Units in East Africa, Jane Y. and Orgenes E. (AMREF 1998) Nairobi Kenya
3. A Medical Laboratory for Developing Countries, Maurice King 1973
4. Practical Medical Microbiology, Churchill Living Stone (1989), Nairobi Kenya
5. Medical Microbiology wolfe publishing ltd, international edition 1990 Mosby USA

YEAR 1 SEMESTER 2

ENVIRONMENTAL HEALTH

60 hours (40hr theory and 20hrs practical)

Purpose

To enable the learner to acquire relevant knowledge, skills and attitude to implement environmental health activities in the community. The course will focus on the concepts and principles of preventive and promotive health.

Learning Objectives

By the end of this course unit, the learner should be able to:

1. Outline safe environmental health procedures that can improve sanitation and health standards in the community.
2. Describe management of environmental health problems.
3. Describe the various sources of water.
4. Describe the various points of water contamination in the water chain supply.
5. Explain the methods of making water safe for human use. .
6. Outline water related diseases.
7. Describe the methods of human waste disposal.
8. Identify common pests, vectors and rodent diseases.
9. Explain the importance of personal hygiene and occupational health and safety.
10. Outline laws governing environmental protection in South Sudan.
11. Describe the health effects of various human activities among the communities in South Sudan.
12. Demonstrate ability to mobilize communities to take responsibility on their own health using different strategies.

Content

Concept of environmental health, Improvement of Sanitation and Health Standards (disease prevention and personal hygiene), personal hygiene, sources of water and common water contamination points, water related diseases, water borne diseases, water washed diseases, common pests, rodents and vectors and their methods of control, food storage and Food hygiene, ways of food preservation, Health effects of

various human activities among communities in South Sudan [agriculture, urbanization, livestock keeping, lumbering, burning of bushes, brick laying, industrialization], housing, occupational health, safety in the community, Laws governing environmental protection in South Sudan.

Learning Experiences

Lectures, community field visits, observation, supervised practical work, demonstrations, return-demonstration, individual assignments, role-plays, and group discussions.

Teaching and Learning Resources

Models of Pit latrines, Models of protected springs, Charts, Candle filters, Building materials, Water treatment plants, Sewage treatment plants, Waste disposal receptacles, Cesspool emptier, Incinerators

References

- 1) G. K. Rukunga. Environmental Health for East Africa (AMREF Series)
- 2) Chris Wood., 2008. Community Health. 3rd Edition. AMREF, Nairobi, Kenya

YEAR 1 SEMESTER 2

MCH/FP

70 hours (Theory 30 hrs/Practice 40hrs)

Purpose

The purpose of this course is to enable the learner to acquire knowledge and skills that is essential for identification and management of maternal and child health/family planning issues for individuals and communities. The course will focus on the common MCH/FP in the communities that need to be addressed in order to improve the health of children and mothers in the communities.

Objectives

1. Explain the importance of Maternal and Child Health and Reproductive Health in a community.
2. Outline various services provided under MCH and Reproductive Health Services.
3. Outline immunisable diseases and the vaccines used against the common killer diseases.
4. Explain the importance and process of cold chain system.
5. Explain the principles underlying the process of immunization.
6. Demonstrate ability to immunize children for the common immunizable diseases.
7. Demonstrate ability to monitor the growth for children under 5years.
8. Demonstrate ability to prepare and administer oral dehydration therapy (ORT) to children.
9. Explain the importance of school health programme.
10. Demonstrate ability to manage antenatal and postnatal clinics.
11. Describe principles of reproductive health
12. Outline various methods of family planning.
13. Outline the role of a clinical officer and other health workers in the provision of reproductive health services including family planning.
14. Demonstrate the ability to educate the community on maternal child health and family planning issues.

Content

Importance of Maternal Child Health and Reproductive Health in a community, MCH/FP services, Immunizable diseases and the Vaccines, importance and process of cold chain system, Principles underlying the process of immunization, Importance of growth monitoring- and breast-feeding of a child- (growth and development, weighing techniques, use of growth card), Procedures of preparing, administering oral Rehydration therapy (ORT), Importance of school health programme (growth, illness, defects, personal hygiene, inspection of school environment and giving health education), importance of antenatal and post natal care, Principles of reproductive health, methods of family planning; Natural, barrier, hormonal, spermicides, IUCDs and surgical sterilization (benefits, Indications, contraindications and side effects), Counseling Special groups on family planning services and STIs prevention), role of a clinical officer and other health workers in the provision of reproductive health services.

Learning Experiences

Lectures, group discussions, role play, simulations, demonstrations, supervised practice, community visits, practical attachments, interviews and observations in the hospitals and communities.

References

1. Tietjen L. et al (1995): Infection Prevention for FP Services Programme
2. MOH Uganda Family Planning Policy Guidelines
3. Bates, B. (1987): A Guide to Physical Examination & History Taking. Lippincott Co.
4. JHPIEGO (1995): Pocket Guide for Family Planning service providers
5. Edmunds M. et al (1987): Clients-responsive Family Planning: A handout for providers
6. IMPACT (1988): Contraceptive safety: Rumours and realities

YEAR 1 SEMESTER 2

COMMUNICABLE DISEASES

100 hrs (Theory-80 hrs Practicals 20hrs)

Purpose

To enable the learner to acquire knowledge and skills on recognition, prevention and control of communicable diseases.

Learning objectives

1. Explain the concepts of communicable diseases
2. Demonstrate ability to identify the common communicable diseases and their importance
3. Describe the pattern of communicable diseases
4. Describe the principles of communicable diseases control.
5. Explain the strategies of managing communicable diseases using standard formats
6. Demonstrate ability to investigate cases and control outbreaks of communicable diseases.
7. Explain the determinants (agents) and distribution of communicable diseases among the communities in South Sudan
8. Describe source and the common routes of disease transmission
9. Describe the life cycle of common parasites and their vectors
10. Identify and manage sexually transmitted diseases
11. Recognize signs and symptoms related to common communicable diseases listed above.
12. Demonstrate ability to diagnose, manage and control the above diseases.

Content

Introduction to communicable diseases, importance of communicable diseases, patterns of communicable diseases, principles of communicable diseases control, strategies of managing communicable diseases, standard formats for communicable diseases, investigation of cases and control of outbreaks (surveillance and screening)

Bacterial infections:TB, Leprosy, Bacterial Meningitis, tetanus, salmonellosis, septicaemia, cholera and other diarrheas, brucellosis, leptospirosis, plague. Rickettsial diseases: typhus, typhoid fever

Viral infections:rabies, measles, smallpox, yellow fever, dengue, HIV/AIDS chicken pox, hepatitis B and E, venereal warts,

Parasitic diseases:Malaria, amoebiasis, giardiasis, schistosomiasis, intestinal, helminthes, hydatid, leishmaniasis, Onchocerciasis, Guinea worm, Trypanosomiasis,

Fungal infection:ring worm ,tinea carporis, tinea peddis,

STIs:Introduction to Sexually Transmitted Infection: syphilis, gonorrhoea, HIV infections, Chlamydia infections, monilliasis, lymphogranuloma venerium, granuloma inguinale, chancroid, venereal warts, genital herpes, bacterial vaginosis

Contact diseases: Scabies, Pediculosis, Skin fungal, Urticaria, Cutaneous, leishmaniasis, Conjunctivitis

Air borne diseases:Common cold, Influenza, whooping cough, measles

Learning Experiences

Lectures, demonstrations, observations and interviews in the wards, supervised practice, group discussion, seminars, case management, role-plays, ward and theatre visits, taking history and conducting physical examinations.

Learning and Teaching Resources

Textbooks, Manuals, Specimens, Relevant photos/slides of parasites, Charts, Vector control units

References

1. Communicable Diseases. AMREF 1999, 3rd Edition. Rural Health Series No. 7.
2. Chris Wood, 2008. Community Health. 3rd Edition. AMREF, Nairobi, Kenya.

YEAR 1 SEMESTER II

CLINICAL PHARMACOLOGY I

44 Hrs (Theory 34 Practical 10)

Purpose

The purpose of this course unit is to enable the learner to acquire relevant knowledge, skills and professional qualities that are essential in prescribing and administering drugs to patients. The course will also enable the learner to acquire knowledge in the management of essential drugs

Objectives:

By the end of this course unit a learner should be able to;

1. Define the term pharmacology, therapeutics and related concepts.
2. Explain the principles of pharmacology and drug therapy.
3. Describe life-span considerations in drug therapy
4. Explain the role of a Clinical Officer in drug therapy
5. Explain the concept of essential drugs.
6. Explain the importance of proper management of drugs in a health facility.
7. Explain the procedure of ordering and receiving drugs
8. Describe drug stock management procedures
9. Explain the importance of rational drug use.
10. Explain the importance promoting patient compliance.
11. Establish measures to reduce drug wastage in health facilities
12. Demonstrate ability to prescribe and administer drugs safely to different types of patients.

Content

Definition of pharmacology, therapeutics, drugs, medicine, classification of drugs and related concepts: pharmacology, addictions, interactions, toxicity, tolerance, drug resistance, idiosyncrasy. Principles of Pharmacology (Absorption, Distribution, metabolism and excretion). Factors that influence drug action and response. Life-span considerations in drug therapy. Role of a Clinical Officer in drug therapy Concept of essential drugs, ordering drugs, receiving and storing drugs, stock management,

rational drugs use, patient compliance, prevention of drug wastage in health units;
Importance of correct and clear instructions to patients.

Learning Experiences

Lectures, classroom discussions, supervised practice, demonstrations, observations, hospital visits, role-plays, simulations.

Teaching and learning resources

Pharmacology textbooks and manuals, WHO Essential Medicines List, MOH RSS Essential Medicines List, Samples of drugs, MOH RSS Treatment Guidelines, Computer and LCD projector.

References

1. WHO Essential Medicines List 17th Edition, 2011
2. MOH-GOSS Essential Medicines List, 1st Edition, 2008
3. Pharmacology by H P Rang and M M Dale 5th Edition 2003
4. Clinical Pharmacology and Therapeutics by Bertram G. Katzung 11th Edition, 2010

YEAR 2 SEMESTER I

CLINICAL PHARMACOLOGY II

Total 126 hours (Theory 58 hours Practical 68hours)

Purpose

The purpose of this course is to enable the learner to acquire knowledge and skills and professional qualities that are essential in prescribing and administering drugs to patients. The course will also enable the learner to acquire knowledge and skills in managing common adverse effects. This course is a continuation of Pharmacology.

Objectives

Describe the preparation, pharmacokinetics, pharmacodynamics, indications, contra-indications, dosages and adverse effects of various classes of drugs.

Content

Preparation, pharmacokinetics, pharmacodynamics, indications, contra-indications dosage interactions and side effects of the following classes of drugs,

Antimicrobial chemotherapy: Classification of antimicrobial drugs, selection of antimicrobial drug, resistance to anti-microbial drugs.

Antibacterial drugs: Aminoglycosides, cephalosporins, fluoroquinolones, macrolides, penicillins, tetracyclines, chloramphenicol, cotromoxazole

Anti-TB drugs: Directly observed treatment short course [DOTS] approach, Isoniazid, Rifampicin, Ethambutol, Pyrazinamide, Streptomycin

Anti-Leprosy drugs, Dapsone, Clofazimine, Rifampicin

Anti-Fungal drugs; Amphotericin B, Flucytosine, Ketoconazole, Nystatin, Griseofulvin, Benzyl Salicylic acid ointment, Clotrimazole

Anti-viral drugs: Acyclovir, Gancyclovir, Anti-retroviral drugs [ARVs]

Antimalarial Drugs: Chloroquine, quinine, Artemisinin combined therapy [ACT], Amodiaquine, Artesunate, Artemether Sulfadoxine/pyrimethamine, Mefloquine, Pyrimethamine, Mefloquine, Primquine,

Anti-Amoebic, anti-giardial and anti-trichomonal Drugs: Metronidazole, Tinidazole, Diloxanide.

Anti-Helminthics: Albendazole, Mebendazole, Levamisole, Niclosamide, , Pyrantel, Praziquantel, Ivermectin.

Antitrypanosomal drugs: DFMOL Suramin, Melarsoprol, Pentamidine

Anti-leshmanial drugs; Sodium stipogluconate, Pentamidine,

Analgesics; Acetylsalicylic acid [ASA], Paracetamol, Indomethacin, Ibuprofen,

Diclofenac. Narcotic Analgesics; Codeine, Pethidine, Morphine, Pethidine,

Sedatives/hypnotics; barbiturates, Promethazine Hydrochloride, Diazepam.

Anticonvulsants/Anti-epileptic drugs; Carbamazepine, Phenobarbitone, Sodium valproate, Phenytoin sodium, Diazepam

Anaesthetics; Local anaesthetics; Lignocain, Ethyl chloride, Amethocaine

General anaesthetics; Premedication, types of general anaesthesia [Ketamine,

Thiopentone: Nitrous oxide, Diethyl ether

Drugs used in Psychiatry; Neuroleptics, Anxiolytics, Anti-depressants and CNS stimulants.

Anti-emetics: Metoclopramide, Promethazine

Brochodilators; Salbutamol, Epinephrine, Aminophylline, Theophylline

Anti-allergic drugs; Chlorphenamine, Dexamethasone, Epinephrine, Hydrocortisone, prednisolone

Haematinics: Iron, Folic acid, Vitamin B12.

Drugs used in Heart failure: Captopril, Digoxin, Hydrochlorothiazole

Anti-hypertensives: Methyldopa, Propranolol, Guanethidine, Nifedipine, Reserpine,.

Drugs acting on the uterus: Ergometrine, Oxytocin, Syntometrin, Salbutamol.

Antidiabetic drugs: Oral hypoglycaemics; Tolbutamide, Glibenclamide, Metformine
Insulin preparations,.

Diuretics: Bendrofluazide, Furosemide, Spironolactone, Hydrochlorothiazole.

Antiseptic/disinfectants: Gentian violet, Cetavlon, Chlorhexinol (Dettol), Gamma benzene hexachloride, Alcohol, Hydrogen peroxide,

Anti-scabies: Benzyl benoate emulsion (BBE) . .

IV Fluids: Normal Saline, Dextrose % with Normal Saline, Ringer's Lactate,

Half - Strength Darrows Solution, 50% Dextrose

Learning Experiences

Lectures, classroom discussions, small groups discussions, role plays, individualized assignments, rotations in specialized clinics in the hospital.

Teaching and learning aids

Pharmacology textbooks and manuals, WHO Essential Medicines List, MOH RSS Essential Medicines List, Samples of drugs, MOH RSS Treatment Guidelines
Computer and LCD projector

References

WHO Essential Medicines List 17th Edition, 2011

MOH-GOSS Essential Medicines List, 1st Edition, 2008

Pharmacology by H P Rang and M M Dale 5th Edition 2003

Clinical Pharmacology and Therapeutics by Bertram G. Katzung 11th Edition, 2010

YEAR 2- SEMESTER 1

HEALTH SERVICES MANAGEMENT

90hrs (Theory 60 hrs/Practical 30hrs)

Purpose

The purpose of this course is to enable the learner to acquire knowledge and skills that are useful in the management of health facilities, people and work at the County, health center and the communities. The course will focus on the concepts, principles and issues relating to health services management, leadership and governance for effective delivery of health care services.

Learning Objectives

By the end of this course student should be able to:

1. Explain terminologies and concepts of health Systems management
2. Describe Components of a health system
3. Describe concepts of Systems thinking for health systems strengthening
4. Describe the characteristics of a functioning health system
5. State Challenges and emerging health systems issues
6. Describe the structure of the health system in South Sudan
7. Explain the functions of different levels of the health system
8. Explain the external and internal factors that affect function of health system
9. Outline the six building blocks of health system
10. Explain the concepts of Management and Leadership Health system. .
11. State the principles of management in health system
12. Explain the differences between management and leadership in health systems
13. Describe different types of leadership in health system
14. Management and leadership in health systems
15. Describe functions of management.
16. Outline the levels of management
17. Explain the concept of governance in the health system
18. Describe the management of human resources for health
19. Demonstrate the ability to manage finance in the health system

20. Demonstrate the ability to manage health service delivery in the health care system
21. Demonstrate the ability to manage medical technology and other resources for health
22. Demonstrate the ability to manage Health management information system
23. Describe Monitoring and evaluation of health system
24. Demonstrate the ability to manage human resources
25. Demonstrate the ability to manage logistics and health facility.
26. Demonstrate ability to generate and use health information systems.
27. Explain the process of supervising, coordinating and evaluating staff performance.
28. Develop ability to develop teamwork among members of staff.
29. Demonstrate ability to supervise staff in health care delivery system.
30. Demonstrate ability to plan, organize and implement a community health programme/activity in a health center and in the community.
31. Demonstrate ability to determine the required resources including staff, drugs and equipments for a health facility in order to operate effectively.
32. Demonstrate the ability to collect analysis and interpret data.
33. Demonstrate the ability to write disseminate reports.

Content

Terminologies and concepts of health Systems management, Components of a health system, Concepts of Systems thinking for health systems strengthening, Characteristics of a functioning health system, Challenges and emerging health systems issues, Structure of the health system of South Sudan and their functions, Factors that affect functions of a health system, The six building blocks of health system, Concept of Management and Leadership in Health system, The principles of management in health system, The differences between management and leadership in health systems, Different types of leadership in health system, Management and leadership in health systems, Functions of management, Levels of management, Concept of governance of the health system; Management of human resources for health; Health financing and

financial management in the health system; Managing health service delivery in the health care system; Managing medical technology and other resources for health; Managing Health information system; Design of implementation, data collection and analysis, report writing; Monitoring and evaluation health system;

Learning Experiences

Lectures, demonstrations, small group discussions, seminars, simulations, role-plays, community/hospital visits, observations and interviews in the hospitals and the community.

YEAR 2- SEMESTER 1

MENTAL HEALTH

110Hrs (Theory 60 hrs Practical 50hrs)

Purpose

To enable the learner to acquire relevant knowledge, skills and professional qualities in the practice of mental health in both health facility and community.

Objectives

By the end of this course unit; the learner should be able to;

1. Explain the concept of mental health and related terminologies.
2. Take and record comprehensive patient history of patients with mental problems.
3. Perform physical examination on patients with problems related to mental health.
4. Classify major mental illnesses and their characteristics.
5. Describe common factors responsible for causation of mental illnesses in the community.
6. Explain the preventive measures of mental illness in the community.
7. Demonstrate ability to diagnose and manage patients with common mental illnesses appropriately.
8. Identify and refer cases of mental illness for further treatment and management.
9. Identify factors related to mental illnesses in the family/community and provide education and counseling appropriately.
10. Demonstrate ability to provide post-traumatic counseling and rehabilitative care services to patients with mental illness.
11. Demonstrate ability to counsel and advise patients with psycho-social problems.

Content

Introduction to Psychiatry, symptomatology in mental health; History taking and physical examination in mental health, Classification of mental illnesses namely: genetic, physical, psychological and social. Disorders of perception: illusion and hallucinations; Disorders of thought (delusions, obsessions, flight of ideas, retardation of thought). Disorders of memory: amnesia and confabulation; Disorders of consciousness

(disorientation and clouding). Aetiology of mental illnesses, common mental illness include; affective disorders (mania, depression), schizophrenia, alcohol and drug abuse, organic disorders, dementia, delirium, unexplained somatic disorders, anxiety disorder, personality disorder, epilepsy, child abuse, mental retardation and treatment in Psychiatry.

Learning Experiences (Teaching Methodology)

Lectures, demonstrations, group discussions, brainstorming, simulations, role-plays, community/hospital visits, observations and interviews in the hospitals.

References

1. Christine Adamec et al, (1996), How to live with ill person
2. Mueser et al, (2006), The Complete only guide to Schizophrenia, The California Res.
3. Harriet et al, (1990), Intervention in mental illness international perspective, Free Res.

YEAR II SEMESTER I

ENVIRONMENTAL HEALTH II

50 Hours (Theory 10 hours Practicals 40 hours)

Purpose

To equip the learner with competences to guide communities manage their environmental health for better health outcomes.

Learning objectives

By the end of this unit a learner should be able to:

1. Describe the methods of water treatment for human use.
2. Participate in water protection and treatment activities
3. Describe the methods of solid wastes management
4. Participate in solid waste management activities
5. Describe methods of liquid waste disposal.
6. Participate in constructing liquid waste management facilities e.g. VIP latrines, WC systems etc.

Content

Methods of water treatment and protection; Solid wastes and disposal methods in the community; Liquid waste and disposal in the community, construction of VIP latrines and WC systems.

Learning Experiences

Lectures, community field visits, observation, supervised practical work, demonstrations, return-demonstration, individual assignments, role-plays, and group discussions.

Teaching and Learning Resources

Models of Pit latrines, Models of protected springs, Charts, Candle filters, Building materials, Water treatment plants, Sewage treatment plants, Waste disposal receptacles, Cesspool emptier, Incinerator.

References

1. G. K. Rukunga, Environmental Health for East Africa -AMREF Series
2. Chris, W., 2008. Community Health. 3rd Edition. AMREF, Nairobi, Kenya

YEAR 2 SEMESTER 1

COMMUNITY ATTACHMENT (Community Based Education and Service (COBES I)

4 weeks

Purpose

The purpose of the community attachment is to enable the students to be exposed to related working environment and conditions in the communities for four weeks under supervision of the Primary Health Care Supervisors, Public Health Officers/ Workers and teaching staff from the Institution.

The students will be closely supervised to ensure that they are exposed to all the essential procedures that are relevant for their training.

The exposure will include participating in health education sessions in the community during this period

This will be on the first semester of the second year where students have learned more about environmental health and community needs assessment principles and methods. The Primary Health Care Supervisors, Public Health Officers/ Workers and teaching staff will guide and assess the students according to the checklists. The assessment will be part of continuous assessment test in health services management in the year 2, Semester 1.

Objectives

At the end of the placement (attachment, the learner will be able to:

1. Demonstrate ability to organize for Home visits
2. Demonstrate ability to conduct health education sessions
3. Demonstrate ability to collect data from the community
4. Demonstrate ability to process, analyze and interpret data
5. Demonstrate ability to write field report
6. Participate in environmental health practice

Content

Making contact with the relevant communities local authorities, establish relationship with the community, working with the community in the problem identification and developing intervention to deal with the problems. Undertaking the role of change agent in problem identifications and solving in the community. report writing and giving of feedback to the community,

Learning Experiences

Community field visits, participation in community based activities, feedback to the community.

YEAR 2 SEMESTER I

PATHOLOGY

54 hours (Theory 30 hrs Practical 24hrs)

Purpose

The purpose of this course is to enable the learner to acquire knowledge on pathology that is essential in managing various diseases and conditions. The information is useful in making diagnosis and deciding on the management strategy regarding the treatment for the patients.

Objectives

1. Define the term pathology.
2. Explain the cause of cell injury and cellular adaptation
3. Describe immuno-pathology
4. Describe hemodynamic disorders
5. Describe the inflammation and wound healing process
6. Classify neoplasia
7. Demonstrate the ability to carry out hematological procedures and interpret the findings
8. Demonstrate ability to take laboratory specimens for pathological examinations.

Content

Definition pathology, causes of cell injury, HIV/AIDS, Dehydration and electrolyte imbalance, Tumour classifications, Simple haematological procedures- (blood collection, preparation, examination and interpretation of blood slide, blood grouping and cross-matching, blood counts, estimation of H/B, Serological tests; interpretation of various haematological procedures). Use of microscope in pathology.

Common pathological disturbances in the circulatory system. (Metabolic disorders, oedema, calcification, pigmentation disorders and deficiency diseases) Characteristics of benign and malignant tumors. Classification of neoplasm: lymphomas and lymphosarcomas, sarcomas, fibromas and fibrosarcomas, lipomas, hemangiomas, neuromas, adenomas and adenocarcinomas, osteoma and osteosarcoma, chondroma,

epitheliomas, cystic tumors. Predisposing factors of neoplasms: environment, habits, race and genetics.

Learning Experiences

Modified lectures, classroom discussions, supervised practice, demonstrations, observations, hospital visits, role-plays, simulations.

Learning Resources

Text books, Lab instruments e.g. Microscope, Lab supplies, teaching and learning slides, Reagent, simulators

References

1. Rose & Wilson (2010) Anatomy and Physiology, 11th Edition
2. Dinah V. Parum, Essential Clinical Pathology,
3. Kathryn L & Sue E (2002) Pathophysiology. The Biological Basis for Disease in Adults and Children, 4th Edition, Mosby London.

YEAR 2 SEMESTER 1

MICROBIOLOGY II

50 hours (Theory 20hrs/Practical 30hrs)

Purpose

The purpose of the course is to enable the learner to acquire knowledge, practical skills and professional qualities in managing various disease conditions. The knowledge and skills are essential in diagnosis and management of patients and setting up of a simple microbiology laboratory

Objectives

1. Demonstrate the ability to carry out various staining methods
2. Demonstrate the ability to perform sterilization and disinfection procedures.
3. Demonstrate ability to use microscopes
4. Demonstrate ability to carry out sample collections, full haemogram and interpretations of results.
5. Demonstrate ability to set and maintain simple microbiology laboratory.

Content

Staining methods: Giemsa Method, Giel Nelson stain, (Field stain A & B rarely used now) Romanowsky stain, wet preparation, CSF

Methods of Sterilization and disinfections, Dry heat: autoclaving, flaming up to red hot, electric ironing, use of chemicals e.g. alcohol, Lysol, formaline etc., Boiling 120°C

Complete Haemogram: HB, WBC, blood grouping, Mps, Micro filarial,

Requirements for setting simple lab: Microscope and all components, centrifuge, fridge, incubator, distillator, staining racks, test tubes, ESR stand, furniture, appropriate room with ventilation 4x8m

Learning Experiences

Lectures, supervised laboratory practice, demonstrations, small group discussions, Simulations

Teaching and Learning Resources

Lab instruments e.g. Microscope, Lab supplies, teaching and learning slides, Reagent, simulators, stabilizers Quality control devices

References

1. Standard Operating Procedure for Essential Laboratory Tests (AMREF on behalf of MOH Kenya, Tanzania, Zanzibar and Uganda 2008)
2. A Practical Laboratory Manual for Health Units in East Africa, Jane Y. and Orgenes E. (AMREF 1998) Nairobi Kenya
3. A Medical Laboratory for Developing Countries, Maurice King 1973
4. Practical Medical Microbiology Churchill Living Stone 1989, Nairobi Kenya
5. Medical Microbiology Wolfe Publishing Ltd international edition 1990 Mosby USA

YEAR 2 SEMESTER 2

BASIC EPIDEMIOLOGY AND BIostatISTICS

60 hrs (Theory 40 hrs Practical 20hrs)

Purpose

To enable the learner to acquire relevant knowledge, skills and attitudes in epidemiology and biostatistics in the practice of clinical medicine.

Learning Objectives

By the end of the course the learner should be able to:

1. Explain the concept of epidemiology
2. Explain the use of epidemiology in the practice of clinical medicine.
3. Describe determinants of health in epidemiology
4. Explain concepts of disease measurement in epidemiology
5. Describe population dynamics
6. Describe vital health statistics.
7. Explain the relationship between population dynamics and disease (communicable and non-communicable).
8. Describe major steps in the management of disease outbreak
9. Demonstrate ability to conduct disease surveillance
10. Define common terms used in biostatistics
11. Explain different types of variables in biostatistics
12. Demonstrate ability to present biostatistical information using; graphs, charts, etc
13. Explain the various research methods and the process of conducting research
14. Demonstrate ability to perform statistical analysis and interpret the findings.
15. Demonstrate ability to compile health reports using appropriate statistics.

Content

Definition of epidemiology and related terms (prevalence, incidence, rate, ratio, proportion, relative risk, risk ratio, attributable risk, attributable fraction, absolute risk, incidence rate); Importance of Epidemiology

Determinants of health: environmental, socio-economic, Biological, behavioral and health services factors, Disease causation, natural history of disease.

Concepts of disease measurement in epidemiology, population dynamics, vital health statistics (birth, death, illness, marriages, specific rates, infant mortality rates, under five mortality rates, neonatal mortality rate, peri-natal mortality rates, maternal mortality rates, population growth rate, crude birth rate, crude death rate, fertility rate, fatality rate, disease specific rates, odd ratio), the relationship between population dynamics and disease (communicable and non-communicable). Major steps in the management of disease outbreak, conduct disease surveillance, definition of common terminologies used in biostatistics, different types of variables in biostatistics, data presentation methods, Various research methods and the process of conducting research, Statistical analysis and interpretation of findings, Compiling health reports using appropriate statistics.

Learning Experiences

Lectures, classroom discussions, case presentations, assignments on data analysis and report writing.

Teaching and Learning Resources

Calculators, Textbooks, Health facility records, MoH data sources.

References

1. Gordis, Epidemiology, 3rd Edition
2. Spiegel, Murray R.(2008), Schaum's outline of theory and problems of statistics McGraw-Hill
3. Triola, Mario F (2008), Essentials of statistics. Boston Pearson
4. Medical Statistics from Scratch. An Introduction for Health Professionals (2nd Edition) by David Bowers
5. Fundamentals of Biostatistics. (7th edition) by Bernard Rosner

YEAR 2 SEMESTER 2

OPHTHALMOLOGY

50 hours (Theory 20 hrs Practical 30hrs)

Purpose

The purpose of this course unit is to enable the learner to acquire knowledge and clinical skills required in the diagnosis and management of common eye conditions.

Objectives

By the end of the course unit a learner should be able to;

1. Obtain and record comprehensive patient history in ophthalmology.
2. Demonstrate ability to carry out visual assessment (visual acuity) correctly
3. Identify signs and symptoms of common eye conditions.
4. Carry out common ophthalmic procedures
5. Demonstrate the ability to perform eye examination by inspection and using ophthalmic equipment
6. Interpret the results of eye examination.
7. Demonstrate ability to manage eye conditions.
8. Identify major ophthalmic conditions for referral and take the necessary action.
9. Demonstrate ability to counsel and provide Health Education on eye conditions

Content

History taking in ophthalmology; Physical examination in ophthalmology including; Visual Acuity assessment, Eyeball inspection, Digital tonometry, and inverting the upper eyelid.

Ophthalmic diseases and conditions (Conjunctivitis, Corneal Ulcer, Trachoma, Uveitis, Glaucoma, Vitamin A deficiency, Cataract, Retinoblastoma, Hordeolum, Chalazion and Pterygium, Eye injury, Refractive errors), Identification of ophthalmic emergencies and preliminary treatment before referral to specialist, health education on ophthalmic conditions.

Learning Experiences

Modified lectures, demonstrations, return demonstrations, observations and supervised practice, bed side teaching, case presentations, role-plays

Teaching and learning Resources

Teaching wards, patients, Textbooks, ophthalmology equipment

References

- 1) Ophthalmology: Vaughan and Asbury's general ophthalmology by Riodan-Eva and Paul
- 2) Kumar & Clark (2002) Clinical Medicine. Fifth edition. U.K.

YEAR 2 SEMESTER 2

EAR, NOSE, THROAT [ENT]

45 hours (Theory 15 hrs and Practical 30hrs)

Purpose

The purpose of this course is to enable the learner to acquire relevant competences required in management of common ENT conditions.

Objectives

By the end of this course unit a learner should be able to;

1. Describe anatomy and physiology of the ear nose and throat (ENT).
2. Obtain and record comprehensive patient history in ENT.
3. Identify common instruments used in ENT.
4. Identify signs and symptoms of common ENT conditions.
5. Make differential diagnosis of the common ENT conditions.
6. Demonstrate ability to manage common ENT conditions.
7. Demonstrate ability to carry out minor ENT procedures.
8. Identify cases for referral and take the necessary actions.

Contents

Review of the Anatomy and physiology of the ear, nose and throat. Taking patient's history on ENT, common instruments of ENT and their use, Recognition and management of common ENT conditions: cleft palate, cystic hygroma, epistaxis, tonsillitis, nasal polyps, sinusitis, rhinitis, nasal allergy, mastoiditis, adenoid disease, wax in the ear, otitis externa, otitis media, quinsy, Ludwig angina, parotitis, oesophagitis, oesophageal varices, adenoid hypertrophy, foreign bodies in the ear, nose, air way and throat, trauma, hearing defects, pharyngitis, and abnormalities of the larynx and health education.

Minor ENT procedures: ENT examination, removal of foreign bodies, incision and drainage of abscesses of ENT, prevention of complications of ENT conditions and Referral for further action.

Learning Experiences

Lectures, demonstrations, group discussions, individual assignment, observations and interviews in the wards, supervised practice, bed side teaching, , role-plays, clinical rotations, ward and theatre visits, taking history and conducting physical examinations

Teaching and learning resources

Text books and Manuals, Anatomical Models, ENT instrument kit, ENT Clinic

References

- Chris De Souza, Marcos Goycoollea, 1995, Textbook of Ear, Nose and Throat, 1st Edition, London, Uk.
- Otorhinolaryngology
- <http://www.cincinnatichildrens.org/ed/clinical/fellow/ent/default.htm>
- http://www.medfriends.org/specialty_info.htm
- <http://www.nrmp.org/data/chartingoutcomes2011.pdf>

YEAR 2 SEMESTER 2

ROTATION IN SPECIAL CLINICS

4 WEEKS (120 hours)

Purpose

The purpose of this clinical rotation is to enable the learner to practice procedures under supervision in the special clinics namely: ENT, Maternal and Child Health/Family planning, Ophthalmology, Pharmacy, Laboratory, minor theater, Dental Clinic, Mental health clinic. During the rotations, the learner will be expected to acquire knowledge, skills and professional qualities that are essential in clinical practice in all the units.

Objectives

By the end of the clinical rotation a learner should be able to;

1. Demonstrate ability to communicate effectively with staff and clients in the units
2. Display positive attitudes to clients and fellow colleagues.
3. Identify common conditions in the units and manage them appropriately
4. Identify common instruments used in each department
5. Demonstrate ability to perform procedures under supervision
6. Demonstrate ability to observe risk precautions in each department
7. Demonstrate ability to keep records and provide report to supervisors in each department.
8. Demonstrate ability to advice/counsel clients and patients on various health issues
9. Participate in giving health education to patients and clients

Learning experiences

Demonstration, return demonstrations, observations, supervised practice, small group tutorials, case presentations, small group discussion, case study.

NB. Learner's performance will be assessed using standard checklists for each department.

YEAR 2 SEMESTER 2

MEDICINE I

60 hrs (Theory 40 Practical 20hrs)

Purpose

The purpose of this course is to enable the learner to acquire essential knowledge, skills and professional qualities in managing medical diseases & conditions.

Objectives

At the end of the course unit, the learner shall be able to:

1. Define basic concepts in Medicine
2. Demonstrate the ability to take a comprehensive history from a patient
3. Demonstrate the ability to carry out complete physical examination of a patient
4. Identify and describe signs and symptoms of RS and GIT diseases
5. Explain the patho-physiology of the common RS and GIT diseases
6. Carry out relevant Investigations in different RS and GIT diseases
7. Demonstrate ability to recognize differential diagnoses of common diseases
8. Demonstrate ability to diagnose, manage and prevent above diseases
9. Explain complications resulting from above diseases
10. Demonstrate ability to provide follow up plan for patients

Content

Introduction and concept of Medicine

Clinical Methods: History taking: Physical Examination: general and systemic examination, Respiratory system disorders: common cold, influenza, laryngitis, tonsillitis, pneumonia, tuberculosis, lung abscess, bronchitis (acute and chronic), bronchial asthma.

Gastro-intestinal system disorders: oral lesions, peptic ulcers, gastritis, bacillary dysentery, amoebiasis, Giardiasis, intestinal worms, Hepatitis, cirrhosis of liver, liver failure, hepato-cellular carcinoma, peritonitis, pancreatitis, Constipation,

Learning Experiences

Lectures, demonstrations, observations and interviews in the wards, supervised practice, bed side teaching, case presentations, role-plays, clinical rotations, ward and theatre visits, taking history and conducting physical examinations.

Teaching and Learning Resources

Text books, Manikins, Diagnostic tools, Hospital with relevant patients, Simulators, Clinical lab

References

1. Manson's Tropical Diseases, Twenty First Edition Gordon Cook & Alimuddin Zumla, 2003, Saunders
2. Kumar & Clark (2002) Clinical Medicine. Fifth edition. U.K.
3. Kathryn L & Sue E (2002) Pathophysiology. The Biological Basis for Disease in Adults and Children, 4th Edition, Mosby London.
4. MSF (2003) Clinical Guidelines for Curative Programmes in Hospitals and Health Dispensaries. Fifth Edition, France Paris.
5. MOH/GOSS (2006) Preventive and Treatment Guidelines for Primary Health Care Units & Hospitals, Juba South Sudan
6. MOH (2011) Uganda National Clinical Guidelines on Management of common conditions. Second Edition. Kampala, Uganda.
7. Medicine Net.com (2012)

YEAR 2 SEMESTER 2

SURGERY I

60 hours (Theory 35 hrs and Practical 25hrs)

Purpose

The purpose of this course is to enable the learner to acquire relevant competences in managing common surgical conditions.

Objectives

By the end of this course unit a learner should be able to;

1. Obtain and record comprehensive surgical history.
2. Identify common surgical instruments and how they are used.
3. Implement aseptic procedures appropriately.
4. Demonstrate ability to administer anesthesia correctly.
5. Practice pre and post-operative care.
6. Identify surgical conditions.
7. Demonstrate ability to manage common surgical conditions.
8. Demonstrate ability to carry out minor surgical procedures.
9. Demonstrate ability to make differential diagnosis of the common surgical conditions.
10. Identify cases for referral and take the necessary action.

Content

Taking Surgical history, physical examination in surgery, common surgical instruments and their use, sterilization using various methods, administration of local and general anesthesia, Pre and post-operative care, Investigations in surgery, Managing surgical patients. Common surgical conditions: Boils, impetigo, hand infections, inflammation, septicaemia, cellulitis, wounds, abscesses, skin ulcers, burns, urinary retention, shock, haemorrhage, blood transfusion, benign tumors e.g. lipomas, cysts and ganglions, burns, foreign bodies, bites and stings.

Minor surgical procedures; Incision and drainage, debridement, surgical toilet and suture circumcision, dilatation of strictures, excision of benign tumours, cysts and removal of foreign bodies. Emergency surgical conditions like injuries of; the head and neck, chest, abdomen, and extremities, Care and storage of surgical instruments, Practice of aseptic procedures, Infection prevention and control in the ward.

Learning Experiences

Lectures, demonstrations, group discussions, individual assignments, case presentations, role-plays, clinical rotations (ward and theatre visits, bedside teaching, supervised practice and observations and interviews in the wards)

Teaching and Learning Resources

Textbooks, Wards, Patients, surgical equipment, manikins,

References:

1. Clinical Surgery International edition
2. Oxford Handbook of Clinical Surgery 2nd & 3rd edition
3. Short Practice of Surgery 23rd edition
4. Essential surgery
5. **Website:** www.surgery.com

YEAR 2 SEMESTER 2

PAEDIATRICS I 50Hrs (Theory 30hrs Practice 20hrs)

Purpose

The purpose of this course is to enable the learner to acquire relevant knowledge, clinical skills and attitudes in the care of children and management of childhood illnesses.

Objectives

By the end of this course unit a learner should be able to;

1. Define Paediatric terminologies and concepts
2. Explain vital statistics used in child health care
3. Describe various Paediatric conditions.
4. Demonstrate ability to obtain and record a comprehensive patient history.
5. Demonstrate ability to perform complete physical examination related to child diseases.
6. Demonstrate ability to diagnose and manage neonatal diseases/conditions appropriately
7. Demonstrate ability to monitor and promote, growth and development of children in the community.
8. Explain the correct infant feeding procedures.
9. Store and administer vaccines appropriately.
10. Explain the dangers of the childhood immunizable diseases.
11. Identify and appropriately manage or refer emergency paediatric cases for further management through triaging.

Content

Definition and overview of Paediatrics, History taking, physical examination and investigations, interpretation of findings in Paediatrics. Care of the newborn; examination of the newborn immediate and routine care of the newborn, Birth asphyxia, Neonatal hypoglycaemia, Neonatal hypothermia, Respiratory distress syndrome [RDS] Neonatal sepsis, Neonatal jaundice, Birth trauma, Prematurity, Congenital disorders,

Low birth weight babies, Small for gestational age babies, Large for gestational age babies, Post-maturity , Seizures in the new born and; Infant feeding; breast feeding and Weaning, Malnutrition, Growth and development; Childhood immunizable diseases, Expanded Programme on Immunization [EPI].

Learning Experiences

Modified Lectures, demonstrations, observations and discussions in the wards, supervised practice, bed side teaching, case presentations, role-plays, clinical rotations, ward and theatre visits, video teaching, history taking and physical examinations practice.

Teaching and learning Resources

Textbooks, Child health cards, Handouts, Manikins, Weighing scales [Bathroom, Beam & Salter types], Height/Length measuring boards, Standard weight and height charts, Tape measures including MUAC tape, Drug samples, Computer and LCD projectors, Baby incubators, Patients/clients, hospital wards, Partographs,

References

1. Nelson Textbook of Paediatrics, 18th Edition, 2007.
2. Current Paediatric Diagnosis & Treatment 16th Ed: William W. Hay Jr, et al By McGraw-Hill Education 2002 – Europe.
3. Nelsons text books of Paediatrics (19th Edition).
Harriet Lane Hand Book of Paediatrics (17th Edition).
4. Child health Manual by AMREF 3rd Edition, 2006.
5. WHO Pocket Book of Hospital Care for Children 1st Edition 2007.
6. WHO Management of the Child with a Serious Infection or
7. Severe Malnutrition, 1st Edition 2000.
8. IMCI Chart booklets and charts.
9. IMCI videos

YEAR 2 SEMESTER 2

OBSTETRICS AND GYNACOLOGY I

60 hrs (Theory 40 hours, Practical 20hrs)

Purpose

This course is to enable the learner to acquire relevant competencies in obstetric and gynaecological care.

Objectives

1. Identify the structure and functions of a normal pelvis.
2. Outline the female external and internal reproductive organs
3. Explain normal menstrual cycle.
4. Explain fertilization and embryology.
5. Demonstrate the ability to conduct complete history taking, physical examination and carry out routine investigation
6. Define focused antenatal care and explain the aims of focused antenatal care
7. Implement focused antenatal care in the health unit and community.
8. Define normal pregnancy, labour and puerperium.
9. Describe the stages of normal labour
10. Manage a mother during labour and puerperium

Contents

1. Review of obstetrical anatomy and physiology;
2. Structures of the fetal skull and its dimensions,
3. History taking and physical examination in obstetrics and gynaecology
4. Focused antenatal care
5. Placenta at term and its functions,
6. Physiology of pregnancy,
7. Managing the four stages of labour using a partograph
8. Puerperium and infant care,

Learning Experiences

Lectures, demonstration, return demonstration, small group discussions, observations and interviews in the wards, supervised practice, bed side teaching, case presentations, role-plays, clinical rotations, ward and theatre visits and simulations.

Learning resources

Text books, Manuals, Videos, Patients, Obstetric and Gynaecological instruments, Manikins

References

1. Pitkin R. M. & Zlatik f. J. (1980), Obstetrics & Gynaecology: Medical Publishers Chicago USA
2. Garey et al (1990): Gynaecology Illustrated.
3. Hovard C. Brown r. (1987): Obstetrics: Tropical Health Concise notes. Macmillan
4. Howie B. O. (1980): High risk obstetrics. A practical handbook. Macmillan
5. Massawe F., Evan R. & Kagimba J. Gynaecology & Obstetrics AMREF, Nigeria
6. Gynaecology text by D. C. Dunta
7. Gynaecology by ten teachers
8. WHO Integrated Management of Pregnancy and Childbirth (2003)

YEAR II SEMESTER II

HEALTH SYSTEMS RESEARCH I (RESEARCH PROPOSAL WRITING)

35 hours (Theory 10 hours, Practical 25 hours)

Purpose

The purpose of this course unit is to enable the learner acquire knowledge, skills and attitudes in developing appropriate research proposals.

Learning Objectives

By the end of this course unit the learner should be able to:

1. Define research and related terms
2. Describe research methods
3. Describe components of research proposal
4. Describe stages of writing a research proposal
5. Develop research proposal for approval
6. Demonstrate ability to pilot a research proposal
7. Collect data appropriately
8. Process and analyze data appropriately
9. Present data appropriately
10. Demonstrate ability to make an appropriate citation and referencing.

Content

Stages of writing a research proposal:

Chapter 1: Introduction

Background of the study, Problem Statement, Objectives, Research questions / Hypothesis, Significance of the study, Conceptual framework, Geographical scope of the study.

Chapter 2: Literature Review

Coverage and Relevance

Chapter 3: Methodology

Study design, Sources of data, Study Population, Appropriate Study design, Sampling Procedures well described, Clear Study variables, Data collection techniques/strategies

clarified, Data collection tools (clear and relevant), Methods of data collection, Data processing, Steps to minimize errors/Bias, Ethical considerations (issues), Limitations of research study.

Teaching and learning methods:

Field visits, projects, modified Lectures, discussion, case presentations, assignments.

Teaching and Learning resources:

Tutors and lecturers, Library resources, computers, soft ware programmes (SPSS, MS. Excel, Epi info and stata), online and search engines, community visits, Research formats, mathematical sets, Research supervisors, Financial support.

Reference books:

1. Leslie Portney G., Mary Watkins P. 2007. Foundations of clinical research. Applications to practice. 3rd Edition. Pearson Education. New Jersey, USA.
2. Sandy Pokras, 1989. Successful Problem-Solving and Decision making. Finding realistic solutions to the problems you encounter every day. 2nd Edition. Crisp Publications. California, USA).

YEAR III SEMESTER I

HEALTH SYSTEMS RESEARCH II (REPORT WRITING)

35 Hours (Theory 10 hrs, Practical 25 hrs)

Purpose

The purpose of this course unit is to equip the learner with knowledge, skills and attitudes conducting research and report writing.

Learning Objectives

By the end of this course unit the learner should be able to:

1. Describe components of research report
2. Describe stages of writing a research report
3. Demonstrate ability to analyze, interpret and present research findings.
4. Relate the research findings to policy issues, other researches and new theories.
5. Outline relevant conclusions
6. State feasible recommendations
7. Demonstrate ability of writing research report
8. Provide timely feedback for the research findings

Content

Stages of writing a research report:

Chapter 4: Results

Logical flow of results, Different levels of analysis, (Univariate, Bivariate, multivariate), Appropriateness of statistical application, Interpretation of statistical information.

Chapter 5: Discussion of Results

Coverage of methods, findings in relation to other scholars' findings, Implication of findings in terms of policy issues, new theories.

Chapter 6: Conclusions and Recommendations

Relevance of conclusions, Feasibility of recommendations,

Referencing and citations and Dissemination of research findings

Teaching and learning methods

Field visits, projects, Lecture, discussion, case presentations, assignments.

Learning resources

Tutors and lecturers, Library resources, computers, soft ware programmes (SPSS, MS. excel, Epi info and stata), online and search engines, community visits, Research formats, mathematical sets, Research supervisors, Financial support.

Reference books:

1. Leslie Portney G., Mary Watkins P. 2007. Foundations of clinical research. Applications to practice. 3rd Edition. Pearson Education. New Jersey, USA.
2. Sandy Pokras, 1989. Successful Problem-Solving and Decision making. Finding realistic solutions to the problems you encounter every day. 2nd Edition. Crisp Publications. California, USA).

YEAR 3 SEMESTER I

SURGERY II

114 hours (Theory 74 hrs Practical 40hrs)

Purpose

The purpose of this course unit is to enable the learner to develop competencies that are essential in the diagnosis and management of these surgical conditions.

Objectives

At the end of the course units, the learner should be able to:

1. Identify the signs and symptoms related to common surgical, orthopaedic and urological conditions.
2. Demonstrate ability to obtain and record comprehensive patient history in dental conditions.
3. Demonstrate ability to perform complete physical examination related to common dental conditions.
4. Manage common dental conditions
5. Demonstrate ability to provide health education to the patients with dental condition.
6. Identify cases for referral and take appropriate action.

Content

Common surgical conditions: Mastitis and breast abscess, pyomyositis, gangrene, tetanus, skin ulcers, empyema, peptic ulcers, appendicitis, peritonitis, cholecystitis, pancreatitis, hernia, intestinal obstruction, haemorrhoids, goitre.

Surgical instruments:

Common orthopaedic conditions: Strains and sprains, dislocations, fractures, arthritis and osteomyelitis, application plaster of paris and traction, ability to use common orthopedic instruments,

Genital urinary conditions: Renal colic, renal failure, cystitis, Urinary calculi, Urine retention, Urethral stricture and dilatation, Hydronephrosis, phimosis, paraphimosis, circumcision, Hydrocele, elephantiasis, orchitis, epididymo-orchitis, epididymitis, torsion of testes,;

Benign and malignant tumours: Enlargement of prostate gland, tumours and cancer of the breast, Ca prostate, hepatocellular carcinoma, Cysts, lipoma. Osteoma, skin malignancies.

Dental conditions: Review of dental and oral anatomy, dental nomenclature of deciduous and permanent teeth, oral examination, dental instruments, gingivitis, dental caries, periodontitis and periodontal abscess, impacted teeth, dental abscess, pulpitis, jaw dislocation and fractures, tooth extractions and bleeding sockets, bleeding gums, fixing dental stitches. Identifying dental cases for referral, Health education on dental health

Learning Experiences

Lectures, demonstrations, group discussions, individual assignments, case presentations, role-plays, clinical rotations, theatre visits, bedside teaching, supervised practice and observations and interviews in the wards, clinical attachment in dental units.

References

1. Clinical Surgery International edition
2. Oxford Handbook of Clinical Surgery 2nd & 3rd edition
3. Short Practice of Surgery 23rd edition
4. Essential surgery
5. Website: www.surgery.com

YEAR 3 SEMESTER 1

PAEDIATRICS II

101 Hrs (Theory 61 hrs Practical 40 hrs)

Purpose

The purpose of this course unit is to enable the learner to acquire knowledge, skills and professional qualities in diagnosis and management of the following childhood disorders.

Objectives

By the end of this course unit a student should be able to;

1. Describe various childhood disorders.
2. Obtain and record comprehensive child history.
3. Perform proper physical examination of a child.
4. Carry out appropriate investigations and interpret the results.
5. Make appropriate diagnosis.
6. Prescribe and institute appropriate management.
7. Identify and refer cases that need further management.
8. Apply IMCI approach in the management of childhood illnesses
9. Identify and manage cases of child abuse and neglect appropriately

Content

Disorders of various body systems including; Respiratory system; Nervous system, Digestive system; Genito-urinary system diseases; Circulatory system, Musculo-skeletal diseases; Endocrine system. Diseases of the blood and lymphatic system. Abridged Integrated management of Childhood illness approach [Assess the child, classify the illness, identify and provide the required treatment, counsel the mother, provide follow up support, Child abuse and neglect.

Learning methods/ Experiences

Modified Lectures, demonstrations, observations and discussions in the wards, supervised practice, bed side teaching, case presentations, role-plays, clinical rotations, ward and theatre visits, video teaching, history taking and physical examinations practice.

Teaching and learning resources

Textbooks of Paediatrics and Child health, Child health cards, Handouts, Manikins, Weighing scales [Bathroom, Beam & Salter types], Height/Length measuring boards, Standard weight and height charts, Tape measures including MUAC tape, Drug samples, Computer and LCD projectors, Baby incubators, Patients/clients

References

1. Nelson Textbook of Paediatrics, 18th Edition, 2007
2. Current Pediatric Diagnosis & Treatment 16th Ed: William W. Hay Jr, et al By McGraw-Hill Education - Europe 2002
3. Child Health Manual by AMREF 3rd Edition, 2006
4. WHO Pocket Book of Hospital Care for Children 1st Edition 2007
5. WHO Management of the Child with a Serious Infection or
6. Severe Malnutrition, 1st Edition 2000
7. IMCI Chart booklets and charts
8. IMCI videos

YEAR 3 SEMESTER I

OBSTETRICS & GYNAECOLOGY II

91 hrs (Theory 51hrs, Practical 40 hrs)

Purpose

The purpose of this course is to enable the learner to acquire knowledge, skills and professional qualities in the management of abnormalities of pregnancy and gynaecological problems.

Objectives

By the end of this course unit a learner should be able to;

1. Identifying high risk mothers and treat or refer appropriately
2. Recognize and manage diseases or conditions associated with pregnancy.
3. Identify and manage vaginal bleeding during pregnancy.
4. Demonstrate ability to perform vaginal examination.
5. Recognize and manage abnormal labour or refer appropriately.
6. Recognize and manage obstetrical emergencies.
7. Demonstrate ability to use obstetric and gynaecological instruments
8. Identify and manage various Malpositions and malpresentations or refer
9. Manage prolonged labour.
10. Manage complications during puerperium.
11. Manage abnormalities of the menstrual cycle.
12. Manage abnormal vaginal discharges.
13. Manage pelvic inflammatory diseases
14. Manage HIV/AIDs and its complications
15. Identify and manage or refer cases of infertility.
16. Identify and refer cases of tumours and cancer appropriately
17. Conduct or refer cases for gynaecological procedures

Content

High risk mothers, abnormal pregnancy (Ante-partum haemorrhage, Multiple pregnancy, pregnancy induced hypertension, eclampsia, diabetes mellitus, cardiac

diseases, anaemia and malaria during pregnancy, polyhydramnios, oligohydramnios, urinary tract infections, Malpresentations (occipito posterior position, breech, face, brow, shoulder and cord presentations), vaginal examination, prolonged labour, contracted pelvis, cephalo pelvic disproportion, obstructed labour, ruptured uterus, perineal lacerations, post-partum hemorrhage, Pulmonary embolism, obstetric shock. Puerperal pyrexia and sepsis, deep vein thrombosis, obstetric operations, Application of various obstetric and gynaecological instruments, Complications of puerperium, Abnormalities of menstruation, abnormal vaginal discharges, hydatidiform mole, ectopic pregnancy, perforated uterus, salpingitis, STIs and HIV/AIDS, PID, infertility, pelvic abscess, ovarian cyst, tumours and cancers of the reproductive system. Gynaecological Procedures

Learning Experiences

Lectures, demonstrations and return demonstrations, observations and interviews in the wards, supervised practice, bed side teaching, case studies and presentations, role-plays, clinical rotations, ward and theatre visits, video teaching.

Teaching and learning Resources

Text books, Manuals, Videos, Patients, Obstetric and Gynaecological instruments, Mankins

References

1. Pitkin R. M. & Zlatik f. J. (1980), Obstetrics & Gynaecology: Medical Publishers Chicago USA
2. Garey et al (1990): Gynaecology Illustrated.
3. Hovard C. Brown r. (1987): Obstetrics: Tropical Health Concise notes. Macmillan
4. Howie B. O. (1980): High risk obstetrics. A practical handbook. Macmillan
5. Massawe F.; Evan R. & Kagimba J. Gynaecology & Obstetrics AMREF, Nigeria
6. Obstetrics Illustrated 6th edition by Churchill Livingstone
7. Oxford Handbook of Clinical Specialties 2nd edition
8. Uganda Guidelines for Quality Obstetrics and Perinatal Care
9. WHO Integrated Management of Pregnancy and Childbirth (2003)

10. Obstetrics Illustrated 6th edition by Churchill Livingstone

11. Myles Textbook for Midwives , Obstetrics by Ten teachers, Gynaecology by Ten teachers, Kenya Guidelines for Quality Obstetrics and Perinatal Care

12. YEAR 3 SEMESTER 1

MEDICINE II

91Hrs (Theory 51 hours/Practical 40Hrs)

Purpose

The purpose of this course is to enable the learner acquire knowledge, skills and professional qualities in managing conditions related to CNS, CVS, GUT, Musculo-Skeletal System, Dermatology & Endocrine

Learning Objectives

1. Identify and describe signs and symptoms of CNS, CVS, GUT, MSS, Dermatology
2. Explain the patho-physiology of the common CNS, CVS, GUT, MSS, Dermatology
3. Carry out relevant Investigations in different CNS, CVS, GUT, MSS, Dermatology
4. Demonstrate ability to recognize differential diagnoses of common diseases
5. Demonstrate ability to diagnose, manage and prevent above diseases
6. Explain complications resulting from above diseases
7. Demonstrate ability to provide follow up plan for patients

Content

Cardiovascular system disorders: infective endocarditis, hypertension, rheumatic Heart Diseases, Coronary heart Diseases (ischaemic heart diseases), Heart failure

Central Nervous System disorders: Pyogenic meningitis, TB meningitis, epilepsy, encephalitis, Migraine.

Skin Diseases: impetigo, Cellulitis, Carbuncles, fungal skin infestations, herpes zoster, herpes simplex, scabies, pediculosis, Eczema, pemphigus, Psoriasis, allergic dermatitis,

Genito-Urinary system disorders: Urinary disorders (Urine retention & incontinence), Urinary tract infection, acute glomerulonephritis, nephritic syndrome, pyelonephritis, acute cystitis and renal failure.

Infectious diseases: Typhoid fever, Leprosy, Tetanus, Typhus fever, Brucellosis, Septicaemia, HIV/AIDS

Parasitic diseases: Malaria, African trypanosomiasis, Intestinal worms, Leishmaniasis, Dracunculiasis (Guinea worm), Onchocerciasis (river blindness) Schistosomiasis.

Endocrine Disorders: Diabetes Mellitus, Thyrotoxicosis

Learning Experiences

Lectures, demonstrations, observations and interviews in the wards, supervised practice, bed side teaching, case presentations, and clinical rotations in the ward, theatre visits, taking history and conducting physical examinations, Clinical Case study

Teaching and learning Resources

Text books, Manikins, Diagnostic tools, hospital with relevant patients, Simulators, Skills laboratory.

References:

1. Manson's Tropical Diseases, Twenty First Edition Gordon Cook & Alimuddin Zumla, 2003, Saunders
2. Kumar & Clark (2002) Clinical Medicine. Fifth edition. U.K.
3. Kathryn L & Sue E (2002) Pathophysiology. The Biological Basis for Disease in Adults and Children, 4th Edition, Mosby London.
4. MSF (2003) Clinical Guidelines for Curative Programmes in Hospitals and Health Dispensaries. Fifth Edition, France Paris.
5. MOH/GOSS (2006) Preventive and Treatment Guidelines for Primary Health Care Units & Hospitals, Juba South Sudan
6. MOH (2011) Uganda National Clinical Guidelines on Management of common conditions. Second Edition. Kampala, Uganda.
7. Medicine Net.com (2012)

YEAR 3 SEMESTER 1

PUBLIC HEALTH

48 hours (Theory 16 hrs and Practical 32hrs)

Purpose

The purpose of this course is to enable the learner to acquire relevant knowledge, skills and attitudes in the practice of public health.

Learning Objectives

By the end of the course unit the learner should be able to:

1. Explain various concepts and principles of Public health
2. Explain the functions/importance of Public Health
3. Describe various approaches of public health interventions
4. Explain the levels of disease prevention
5. Demonstrate the ability to carry out community mobilization
6. Demonstrate the ability to carry out community diagnosis
7. Ensure active community participation
8. Outline the principles of health education
9. Explain the components of health promotion
10. Apply appropriate communication process in health promotion

Content

Terminologies and Concepts of public health.

Principles of public health: Collective responsibility for health and the major role of the state, Focus on the whole population, Emphasis upon prevention, Recognizing underlying socioeconomic determinants of health and disease, Partnership with the population served, Multidisciplinary basis, Functions of Public Health; Assessing and monitoring of health of the population, Planning, implementing and evaluating public health programmes, Identifying and dealing with environmental hazards, Communicating with people and organizations to promote public health

Approaches of public health: Surveillance, Risk factor identification, Intervention evaluation, Implementation:

Levels of prevention of diseases: Primordial, Primary, Secondary and Tertiary Prevention, Review of the steps in community diagnosis, Development of Vision, Exploration, concept writing, Permission seeking process, Entering the community, Waiting stage, Decision stage, Implementation, Monitoring and evaluation, Re-planning. Steps in community mobilization: Planning for community mobilization, Building a coalition, Implementation of the plan, Monitoring and evaluation, Feedback to the community.

Review of the steps of communication process: Sender, channel, message, decoder, receiver and feed back.

Communication skills: **C** - caring skills, **H** – helping skills, **A** – attending skills, **R** – respecting skills, **M** – managing expectations, **S** - sensitivity

Components of health promotion (Tannahill's Health Promotion Model): Disease prevention, health education and health protection

Factors influencing health promotion (Health Belief model): Health attitudes, beliefs and social support,

Principles of health education: Scientifically reliable and educational, up to date, systematic and flexible, Voluntary and conscious, need based, free flow of communication, provide an opportunity for the clients, Identification of problems, connected and supported by visual means. Steps in health education.

Learning Experiences

Modified lectures; discussion, role play, Brainstorming, Drama, demonstration, field visits, case presentations, assignments, data analysis and report writing.

Teaching and Learning resources:

Mathematical sets, Scientific calculator, Computer programmes of Microsoft word, MS Excel packages, Community owned resource persons, Means of transport (Vehicles)

Reference books:

1. Leslie Portney G., Mary Watkins P. 2007. Foundations of clinical research. Applications to practice. 3rd Edition. Pearson Education. New Jersey, USA.

2. Sandy Pokras, 1989. Successful Problem-Solving and Decision making. Finding realistic solutions to the problems you encounter every day. 2nd Edition. Crisp Publications. California, USA).
3. Principles and practice of public Health in Africa, Volume 1; edited by G.O Sofoluwe, R Schram and DA Ogunekan
4. Principles and practice of public Health in Africa, Volume 2; edited by G.O Sofoluwe, R Schram and DA Ogunekan
5. Text book of preventive and Social Medicine by MC Gupta and BK Mahajan; JAPEE – Publishers
6. International Public Health; Diseases. Programmes, Systems and Policies, Second Edition by Michael H Merson, Robert E black, Anne J. Mills
7. Wooding, N., Nagaddya, T., Nakaggwa, F., 2012. Primary health Care in East Africa. For how long shall countries run after diseases. Fountain Publishers, Kampala, Uganda.
8. Chris, Wood, 2008. Community Health. 3rd Edition. AMREF, Nairobi, Kenya.

YEAR 3 SEMESTER I
CLINICAL ROTATION I IN HOSPITAL
(4 weeks)

Purpose

The purpose of this clinical rotation is to expose learners to patients with various conditions in the four medical disciplines namely: Surgery, Paediatrics, Obstetrics/Gynecology and Medicine. During the rotations, the learner will be expected to acquire professional qualities that are essential in the practice of clinical medicine. The level of competencies will be at observational and assisting in performing certain procedures under supervision of Hospital and NHTI staff. However, there are certain procedures the learner will have mastered and be expected to perform independently. The competencies for practice during the rotation will be provided to the students.

Objectives

By the end of this rotation a learner should be able;

1. Demonstrate ability to take comprehensive patient history.
2. Demonstrate ability to perform complete physical examination.
3. Interpret findings from history and physical examination.
4. Make provisional patient diagnosis.
5. Formulate the plan for investigation and management of the patients.
6. Observe and assist in performing certain procedures.
7. Portray appropriate professional qualities in taking history, physical examination and communicating with the patients and other health team members.

Learning experiences

History taking and perform physical examination in all disciplines, Requesting for relevant investigations, Interpreting results, Making provisional diagnosis, Implementing patient management plans, Performing procedures in the wards, Counseling patients, Small group tutorials, Ward rounds, Case presentations, Observations and interviews of patients , bed side examinations,

YEAR 3 SEMESTER 2

HEALTH CENTRE ATTACHMENT (COBES II)

(4 weeks)

Purpose

The purpose of the health centre attachment is to expose learners to the working environment in a health center under supervision of the health center and NHTI staff.

The exposure will include participating in health centre clinical and management activities. In addition they will participate in community activities including; school visits, home visits, immunization outreaches, water and sanitation projects etc.

Objectives

By the end of the health centre attachment a learner should be able to;

1. Demonstrate ability to take comprehensive patient history.
2. Perform complete physical examination of patients with different types of illnesses.
3. Interpret findings from history and physical examination.
4. Make appropriate diagnosis of a patient.
5. Demonstrate ability to plan investigation and management of patients.
6. Familiarize with the organization and management of a health center.
7. Familiarize with the working environment within the communities.
8. Participate in various community health care activities.
9. Portray appropriate professional qualities in health centre practice

Learning experiences

Conducting OPD clinics, Ward rounds, Antenatal, intra-natal and postnatal care activities, School health visits, Home visits, Community mobilization, Health education at Health Centre and community, Case presentations, Feedback to the community, Water and sanitation activities.

YEAR 3 SEMESTER II

CLINICAL ATTACHMENT IN HOSPITAL

(8 weeks)

Purpose

The purpose of this clinical rotation in better equipped hospital is to enable the learner to gain exposure to various conditions in the four medical disciplines namely: Surgery, Paediatrics, Obstetrics/Gynecology and Medicine. During the rotations, the learner will be expected to acquire professional qualities that are essential in the practice of clinical medicine.

The level of competencies will be at observational and assisting in performing certain procedures under supervision of Hospital and NHTI staff. However, there are certain procedures the learner will have mastered and be expected to perform independently.

Objectives

By the end of this clinical attachment a learner should have practiced following competencies;

1. Comprehensive patient history.
2. Carrying out complete physical examination in all the four main disciplines.
3. Interpreting findings from history and physical examination.
4. Interpreting investigation results
5. Making appropriate patient diagnosis.
6. Implementing patient management plans.
7. Observing and assisting in performing key procedures.
8. Portraying appropriate professional qualities in word practice

Learning experiences

Ward rounds, History taking and perform physical examination in all disciplines, Requesting for relevant investigations, Interpreting results, Making provisional diagnosis, Implementing patient management plans, Performing procedures in the wards, Counseling patients, Discharging patients, Small group tutorials ward rounds, Case presentations, Observations and interviews of patients, Bed side examinations

YEAR 3 SEMESTER 2

CLINICAL ROTATION II IN HOSPITAL

(4 WEEKS)

Purpose

The purpose of this clinical rotation is to enable the learner to standardize clinical performance following clinical attachment.

The students will be expected to revise areas of weakness in their clinical practice and improve where necessary.

Objectives

By the end of clinical rotation II a learner should be able to;

1. Take comprehensive patient history appropriately
2. Perform complete physical examination appropriately
3. Request for relevant investigations
4. Interpret findings from history and physical examination correctly
5. Make appropriate patient diagnosis
6. Implement patient management plans appropriately
7. Perform key procedures correctly.
8. Portray appropriate professional qualities.

Learning experiences will include;

Ward rounds, History taking and perform physical examination in all disciplines, Requesting for relevant investigations, Interpreting results, Making provisional diagnosis, Implementing patient management plans, Performing procedures in the wards, Counseling patients, Discharging patients, Small group tutorials ward rounds, Case presentations, Observations and interviews of patients, Bed side examinations

APPENDICES: CORE COMPETENCIES

Introduction

The Diploma in Clinical Medicine and Public Health is designed to take three years of training. During this period, the learners are expected to develop and acquire knowledge and competencies that are essential in the professional practice. For each year of training, the students are required to acquire and develop core-competencies and to perform procedures that will prepare them to be competent clinicians in various situations.

The competencies are classified under three categories, those that the students should observe being performed by qualified health professionals, those that they should perform with assistance from qualified health personnel and those that they should be able to perform independently during the training period (refer to appendices below).

APPENDIX 1: YEAR 1 SEMESTER II- NURSING AND FIRST AID PRACTICE

The students will be expected to observe nursing staff, providing various nursing procedures. The students will also be expected to assist the nursing staff in providing nursing care and also perform specific nursing procedures unsupervised and under supervision. These procedures and nursing techniques are presented below:

Skill	Observed	Performed with assistance	Performed without assistance
Patient Admission	2	1	5
Positioning patients in bed	2	1	5
Patient discharge	2	1	5
Filling-in various medical records			
Vital Signs (TPR & Bp assessment)	2	1	5
Drug administration (PO, IM, IV, Topical)	2	2	5
Bed making	2	2	5
Patient hygiene (Oral care, Bed bath, Patient toilet etc)	2	1	5
Feeding patients	2	2	5
NGT feeding and aspiration	2	2	5
Pre-operative patient preparation	2	1	5
Catheterization	1	1	2
Enema	1	1	2
Post operative patient management	2	1	5
Wound dressing	1	1	5
Ward cleaning	1	2	5
Aseptic techniques [non-touch technique]	1	1	5
Taking and handling various specimens from patients	3	3	5
Conducting last office	1	2	3
Conduct first aid to various types of patients including Lifting casualties Bandaging Arresting haemorrhage Resuscitation Immobilization of fractures Recovery positioning	2	3	5

APPENDIX 2: YEAR 2 SEMESTER 1 - COMMUNITY ATTACHMENT

During the second year of training, the students are expected to acquire core-competencies in community activities for 4 weeks.

Skills	Observed	Performed with assistance	Performed without assistance
Verbal communication skills with community leaders and members	1	1	2
Conducting community meetings	1	1	1
Conducting home visits	2	1	5
Positive questioning skills	2	1	5
Conducting health education talks	1	1	5
Conducting health surveys	1	1	1
Writing field report	1	1	1
Giving feed back to relevant authorities	1	1	1
Participate in environmental health practice e.g. spring protection, VIP construction, Ecosand, WCs, water tank construction/installation etc.	1	1	1

APPENDIX 3: YEAR II SEMESTER II – ROTATION IN SPECIAL CLINICS

	Skills	Observed	Performed with assistance	Performed without assistance
1	Pharmacy Attachment			
	Interpretation of prescriptions	2	2	5
	Dispensing drugs	2	2	5
	Giving patient instructions about taking of drugs	2	2	5
	Ordering and receiving drugs	2	2	5
	Stock card recording	2	2	5
	Checking for expiry and damage of drugs and supplies	2	2	5
2	Laboratory attachment			
	Cleaning of lab working environment & equipment	2	2	5
	Setting up of various laboratory equipment	2	2	5
	Preparing various materials and reagents in the laboratory	2	2	5
	Collection of specimen from the patient	2	2	5
	Receiving, labelling and storage of specimen	2	2	5
	Specimen preparation	2	2	5
	Examination of specimen	2	2	5
	Recording of laboratory findings	2	2	5
	Interpretation of laboratory results	2	2	5
3	MCH/FP Attachment			
	Growth Monitoring and Promotion [Weighing and charting weight]	2	2	5
	Interpretation of a child's weight	2	2	5
	Maintaining the cold chain system at a health facility – including temperature recording	2	2	5
	Packing of vaccines in a fridge and vaccine carrier	2	2	5
	Maintaining cold-chain during immunization sessions	2	2	5
	Organisation of immunisation sessions	2	2	5
	Administration of various vaccines	2	2	5
	Setting up of antenatal and post natal clinics	2	2	5
	Screening of mothers in ante-natal and post natal clinics	2	2	5
	Giving Health education talks to mothers at antenatal and post natal clinics	2	2	5
	Client counselling for family planning	2	2	5
	Administration of various contraceptives	2	2	5
4	Mental health practical attachment			
	Taking history of patient with mental illness	2	2	5
	Examination of patient with mental illness	2	2	5
	Diagnosing mental conditions	2	2	5
	Managing various mental conditions	2	2	5
	Counselling of family members and close relatives of the patient	2	2	5

5	Eye clinic attachment			
	History taking of patient with eye condition	2	2	5
	Examination of patient with eye condition	2	2	5
	Diagnosing various eye conditions	2	2	5
	Managing various eye conditions	2	2	5
	Health education on prevention of eye diseases and conditions	2	2	5
6	ENT clinic attachment			
	History taking of patient with ENT condition	2	2	5
	Examination of patient with ENT condition	2	2	5
	Diagnosing various ENT conditions	2	2	5
	Managing various ENT conditions	2	2	5
	Health education on prevention of ENT diseases and conditions	2	2	5

APPENDIX 4 a: YEAR II SEMESTER II- HEALTH SYSTEMS RESEARCH I – PROPOSAL WRITING

This assessment tool will be used for marking research proposal which is a course unit in year II semester II. The total marks of 50 should be converted to 100% for this course unit.

Demonstration of competence in writing:	Maximum score	Actual score
Chapter 1: Introduction	18	
Background to the study	5	
Problem Statement	3	
Objectives,	3	
Research questions / Hypothesis	3	
Significance of the study	1	
Conceptual framework	3	
Chapter 2: Literature Review	7	
Coverage	4	
Relevance	3	
Chapter 3: Methodology	25	
Study and Sample Population described	3	
Appropriate Study design	3	
Sampling Procedures well described	3	
Clear Sources of data	2	
Clear Study variables	2	
Data collection techniques/strategies clarified	3	
Data collection tools (clear and relevant)	2	
Steps to minimize errors/Bias	2	
Ethical issues addressed	2	
TOTAL MARKS	50	

**APPENDIX 4 b: YEAR III SEMESTER I- HEALTH SYSTEMS RESEARCH II –
REPORT WRITING**

This assessment tool will be used for marking research report writing which is a course unit in year III semester I. The total marks of 50 should be converted to 100% for this course unit.

Demonstration of competence in writing:	Maximum Score	Actual score
Chapter 4: Results	15	
Logical flow of results addressing each objective	5	
Sub-headings/Titles of tables/charts self explanatory	3	
Rows and columns balancing	2	
Different levels of analysis are clear and understandable	5	
Chapter 5: Discussion of Results	15	
Coverage of methods, findings in relation to other scholars' findings	10	
Implication of findings in terms of policy issues, new theories	5	
Chapter 6: Conclusions and Recommendations	20	
Generated from the study	3	
Feasibility of recommendations	3	
General flow of the report in terms of logic, coherence and good English	5	
Scholarly writing/relevance of quotations	4	
Adherence to required system of referencing	5	
TOTAL MARKS	50	

APPENDIX 5: YEAR 2 SEMESTER II HISTORY TAKING AND PHYSICAL EXAMINATION

During the second semester of the second year of training, the students are expected to acquire core-competencies and skills in clinical medicine, Surgery, Paediatrics as well as in Obstetrics and Gynaecology. These skills include History taking, general and systemic examination of patients.

HISTORY TAKING

The student should be able to take and record patient's history as the first step in making a diagnosis. He/she will be expected to carry this out under guidance of Tutors and Health facility staff. The minimum number of histories to be taken per discipline by each student during every clinical placement should be as follows;

Discipline	Performed with Assistance	Assessed Performance
Medicine	2	5
Surgery	2	5
Paediatrics	2	5
Obstetrics & Gynaecology	2	5

History taking approach will be systematic and may vary from discipline to discipline but will generally follow the following steps.

Step	Maximum Score	Actual Score
Patient Particulars	2	
Patient Chief complaints	2	
History of presenting illness	2	
Systemic review	2	
Past medical history	2	
Past surgical history	2	
Drug history	2	
Family history	2	
Social history	2	
Family history	2	
Summary	2	
Total	22	

PHYSICAL EXAMINATION

Every student should be able to observe physical examination procedures being demonstrated in the various disciplines, do return demonstration and there after practice under supervision.

The minimum number of physical examinations to be performed per discipline by each student during every clinical placement should be as follows;

Discipline	Observed	Performed with Assistance	Assessed Performance
Medicine	2	2	5
Surgery	2	2	5
Paediatrics	2	2	5
Obstetrics & Gynaecology	2	2	5

GENERAL EXAMINATION

Steps	Observed	Performed with assistance	Assessed Performance
General condition	2	1	5
Pallor	2	1	5
Jaundice	2	1	5
Cyanosis	2	1	5
Oedema	2	1	5
Lymphadenopathy	2	1	5
Hydration status	2	1	5
Finger clubbing	2	1	5
Petechiae haemorrhages	2	1	5
Body temperature	2	1	5
Body weight	2	1	5

Systemic examination shall include:

1. Central Nervous System [CNS]
2. Cardiovascular System [CVS]
3. Respiratory System [RS]
4. Gastro intestinal tract and Pa Abdomen (GIT)
5. Musculoskeletal System [MSS]
6. Genito-urinary system (GUS)

The required number of patients for the various systems is as follows:

Step	Observed	Performed with assistance	Performed without assistance
Cardio Vascular System Inspection			
Pallor	1	2	5
Cyanosis	1	2	5
Finger clubbing	1	2	5
Petechiae/haemorrhages	1	2	5
Pericardial heave/hyperactivity	1	2	5
Collateral vessels	1	2	5
Oedema	1	2	5
Palpation			
Pulse	2	1	5
Capillary refilling	2	1	5
Blood Pressure	2	1	5
Jugular venous pressure	3	3	5
Apex beat	2	1	3
Cardiac thrill	2	1	5
Pitting oedema	2	1	3
Percussion			
Shifting dullness	2	2	5
Auscultation			
First and second heart sounds	2	2	5
Added sounds e.g. murmur, plural rub	2	2	5
Respiratory system			
Inspection			
Flaring of the nostrils	2	2	5
Chest symmetry	2	2	5
Swellings	2	2	5
Masses	2	2	5
Chest movement	2	2	5
Respiratory rate	2	2	5
Palpation			
Centrality of trachea	2	2	5
Swellings/masses	2	2	5
Lymphnodes	2	2	5
Chest expansion	2	2	5
Tactile fremitus	2	2	5
Vocal fremitus	2	2	5
Areas of tenderness	2	2	5
Percussion			
Resonance	2	2	5

Step	Observed	Performed with assistance	Performed without assistance
Dullness	2	2	5
Auscultation			
Breath sounds (vesicular & bronchial)	2	2	5
Added sounds e.g. Crepitations & rhonchi	2	2	5
Pleural rub	2	2	5
Vocal resonance	2	2	5
GIT/Pa Abdomen			
Mouth inspection			
Dryness of lips	2	1	5
Ulcers of lips	2	1	5
Oral sores	2	1	5
Pa Abdomen			
Inspection			
Size	2	1	5
Symmetry	2	1	5
Scars	2	1	5
Umbilicus	2	1	5
Movement with respiration	2	1	5
Stretch effects e.g. striae	2	1	5
Collateral vessels	2	1	5
Palpation			
Superficial palpation			
Obvious masses	2	2	5
Obvious tenderness	2	2	5
Deep palpation			
Liver	2	2	5
Spleen	2	2	5
Urinary bladder	2	2	5
Kidneys [bimanual]	1	1	3
Tenderness/Murphy's sign (gall bladder)	1	1	3
Percussion			
Tympanic percussion note	2	2	5
Shifting dullness	2	2	5
Fluid thrill	2	2	5
Auscultation			
Bowel sounds	2	2	5
Bruits (in masses in the abdomen)	2	1	5
Anal and rectal examinations			
Anal sores	2	1	5

Step	Observed	Performed with assistance	Performed without assistance
Anal ulcers	2	1	5
Anal piles	2	1	5
Rectal examination (masses/swellings)	2	1	5

Step	Observed	Performed with assistance	Performed
Musculo-skeletal system			
Inspection			
Gait	1	1	3
Deformities	1	1	3
Muscle thickness	1	1	3
Swellings	1	1	3
Ulcers	1	1	3
Wounds	1	1	3
Bone deformity	1	1	3
Palpation			
Hotness	1	1	3
Tenderness	1	1	3
Swelling in joints, muscles	1	1	3
Joint fluid Accumulation	1	1	3
Joint movement (rigidity)	1	1	3
Muscle bulk			
Muscle power	1	1	3
Measurement of bone deformities	1	1	3

	Observed	Performed with assistance	Performed
NERVOUS SYSTEM			
Mental status	2	2	5
Cranial nerves	2	2	5
Motor function			
Muscle strength	2	2	5
Muscle bulk	2	2	5
Muscle tone	2	2	5
Reflexes	2	2	5
Gait	2	2	5
Involuntary movements	2	2	5
Sensory functions			
Tactile sensation	2	2	5
Position	2	2	5
Vibration	2	2	5
Pain	2	2	5
Temperature	2	2	5
Signs of meningeal irritation			
Neck stiffness	2	2	5
Kerning's sign	2	3	5
Straight leg raising test	2	3	5
Signs of increased intracranial pressure			
Protruding eyes	2	2	5
Bulging fontanneles [below 2 years]			
Unequal pupils	2	3	5
Blurred vision	2	3	5
Vomiting	2	3	5
Convulsions	2	3	5
Increased CSF pressure	2	3	5
Genito-urinary system			
Vaginal examination (PV)			
Inspection of vulva			
Discharges	1	1	3
Rashes	1	1	3
Abnormal growths	1	1	3
Lacerations	1	1	3
Tears	1	1	3
Parasites	1	1	3
Varicose veins	1	1	3
Speculum examination			
Colour of vaginal canal	1	1	3
Cervical growths	1	1	3

Discharges	1	1	3
Ulcerations	1	1	3
Bleeding	1	1	3
Palpation (Digital & Bimanual examination)			
Tenderness in adenexia	1	1	3
Cervical excitability	1	1	3
Cervical dilatation (labour progress)	1	1	3
Male genital examination			
Inspection			
Penile (discharges, sores, swellings, ulcerations, paraphimosis and phimosis)	1	1	3
Scrotum (swellings. Ulcerations, abnormal growths)	1	1	3
Palpation			
Inguinal lymphadenopathy	1	1	3
Tenderness	1	1	3
Reducibility of swellings	1	1	3
Transillumination	1	1	3

APPENDIX 6: YEAR 3 SEMESTER II- CLINICAL ATTACHMENT IN HEALTH CENTRES

A) Clinical attachment in health centre

Competencies to be acquired and assessed in this practicum will include;

Procedure	Observed	Performed with assistance	Performed
Tasks:			
Create rapport	2	2	5
Ask relevant questions	2	2	5
Actively listen to the patient	2	2	5
Record relevant information (history)	2	2	5
Perform quick physical examination	2	2	5
Make correct impression/Diagnosis	2	2	5
Request relevant investigation	2	2	5
Interpret lab result correctly	2	2	5
Prescribe appropriate treatment	2	2	5
Give relevant advice	2	2	5
Refer serious cases when necessary	2	2	5
Preparation of duty roster	2	2	5
Ability to organize/attend meetings	2	2	5
Ability to take stock and fill in stock card	2	2	5
Ability to carry out inventory	2	2	5
Ability to compile a monthly report	2	2	5
Ability develop work plan	2	2	5
Ability to prepare requisition for supplies	2	2	5
Ability to participate in PHC support supervision	2	2	5
Ability to carry out school health services Health education on (personal hygiene, de worming, sex education)	2	2	5
Sanitation assessment in the schools	2	2	5
Nutritional assessment	2	2	5

APPENDIX 7: INTRODUCTION TO PRACTICAL ASSESSMENT RATING SCALES

Introduction

The training of clinical officers is designed to take three (3) years. During the 1st year of training the students are expected to undertake two (2) months of community attachment programme (COBES 1) in a health facility. During this period the students are expected to acquire and develop skills and perform various procedures as part of their training.

The skills will enable them to perform various activities on patient management and Primary Health Care activities in various areas. This practical assessment checklist is therefore designed to assess the performance of students during two (2) months community attachment. The students will be assessed by the clinical instructor in the health facility using a rating scale ranging from 0-4 which is interpreted as follows:

- 0 - Not done
- 1 - Poor performance
- 2 - Fair performance
- 3 - Good performance
- 4 - Very good performance

During the 2nd year of training, the students are expected to undertake a two (2) months clinical rotation in various clinics, units and wards. The clinical instructor will rate the students as above. The students will therefore develop and perform per the checklist.

During the 3rd year of training, the students are expected to undertake a three (3) months ward rotation in a major health facility e.g. major referral hospital in medicine, surgery, obstetrics/gynaecology and paediatrics. The clinical instructor will assess the students as above.

APPENDIX 7a:
RATING SCALE FOR NURSING AND FISRT AID PRACTICE

Student Name: _____
 Admission Number: _____
 Payam _____ County _____

Introduction

This check list is for assessing student's competency in Nursing practice in the ward. It is to be filled by the supervisor and handed to the Academic Master at NHTI after the attachment

Task	Scores					Remarks
	0	1	2	3	4	
Patient Admission						
Positioning patients in bed						
Patient discharge						
Filling-in various medical records						
Vital Signs [TPR & Bp assessment]						
Drug administration (PO, IM, IV, Topical)						
Bed making						
Patient hygiene (Oral care, Bed bath, Patient toilet etc)						
Feeding patients						
NGT feeding and aspiration						
Pre-operative patient preparation						
Catheterization						
Enema						
Post operative patient management						
Wound dressing						
Ward cleaning						
Aseptic techniques [non-touch technique]						
Taking and handling various specimens from patients						
Conducting last office						

Task	Scores					Remarks
	0	1	2	3	4	
Conduct first aid to various types of patients including Lifting casualties Bandaging Arresting haemorrhage Resuscitation Immobilization of fractures Recovery positioning						

Name of supervisor _____ Supervisor's
comments _____

Signature _____ Date _____

Student's Signature _____ Date: _____

APPENDIX 7b:

RATING SCALE FOR COMMUNITY HEALTH ATTACHMENT

Student Name: _____
 Admission Number: _____
 Payam _____ County _____

Introduction

This check list is for assessing student’s competency in community Health Attachment. It is to be filled by the supervisor and handed to the Academic Master at NHTI after the attachment

ACTIVITY	SKILLS	Score					Remarks
		0	1	2	3	4	
Community based health care activities	Ability to conduct community meetings						
	Ability to conduct home visits						
	Applied acceptable approach to the respondent (s)						
	Ability to ask questions positively						
	Ability to identify common health problems						
	Ability to prioritize common health problems						
	Ability to advise respondent and other family members on health promotion & diseases prevention						

APPENDIX 7c: RATING SCALE FOR FIELD REPORT WRITING

POINTS TO CHECK FOR	SCORE					REMARKS
	0	1	2	3	4	
Title page (short and informative)						
Background information well sequenced						
Objectives of the community attachment reflected in sequence						
Methodology of the community survey indicated clearly						
Findings/Results Sequencing & Analysis and Interpretation						
Matches the objective of the survey						
Findings are sequenced according to the objectives						
Sub titles are well numbered, paragraphs and consistence maintained in sections						
Rows and columns of tables have titles that reflect their content						
Tables and graphs have corresponding explanations before or after						
Conclusions are relevant summarized and based on the alarming findings						
Recommendations are based on alarming findings and are action oriented						

APPENDIX 7d: RATING SCALE FOR ENVIRONMENTAL HEALTH PRACTICE

Skill	SCORE					REMARKS
	0	1	2	3	4	
Spring protection						
Ability to identify water spring						
Ability to identify spring eyes						
Participate in all the procedures actively						
Ability to mobilize local resources						
Ability to communicate to the community						
Ability to formulate water committee						
VIP Construction						
Ability to identify suitable site						
Determines correct measurements of site						
Ability to construct a slab						
Ability to construct superstructure						
Ability to give health education on hygiene to the community						

Name of supervisor _____

Supervisor's comments _____

Signature _____ Date _____

Student's signature _____ Date: _____

**APPENDIX 7e:
RATING SCALE FOR CLINICAL PRACTICE IN SPECIAL CLINICS**

Student Name: _____

Index Number: _____ Health Facility: _____

Introduction:

This checklist is to be used for instruction and for assessing clinical competence during special clinics and rotation in Hospital. Each student will be assessed by his/her supervisor in the special clinic and the results of the assessment filled in this form for submission to the Academic Master at NHTI.

	Tasks	Scores					Remarks
		0	1	2	3	4	
1	Pharmacy Attachment						
	Interpretation of prescriptions						
	Dispensing drugs						
	Giving patient instructions about taking of drugs						
	Ordering and receiving drugs						
	Stock card recording						
	Checking for expiry and damage of drugs and supplies						
2	Laboratory attachment						
	Cleaning of lab working environment & equipment						
	Setting up of various laboratory equipment						
	Preparing various materials and reagents in the laboratory						
	Collection of specimen from the patient						
	Receiving, labelling and storage of specimen						
	Specimen preparation						
	Examination of specimen						
	Recording of laboratory findings						
	Interpretation of laboratory results						
3	MCH/FP Attachment						
	Growth Monitoring and Promotion [Weighing and charting weight]						
	Interpretation of a child's weight						
	Maintaining the cold chain system at a health facility – including temperature recording						
	Packing of vaccines in a fridge and vaccine carrier						
	Maintaining cold-chain during immunization sessions						
	Organisation of immunisation sessions						
	Administration of various vaccines						
	Setting up of antenatal and post natal clinics						
	Screening of mothers in ante-natal and post natal clinics						
	Giving Health education talks to mothers at antenatal and post natal clinics						

	Client counselling for family planning						
	Administration of various contraceptives						
4	Mental health practical attachment						
	Taking history of patient with mental illness						
	Examination of patient with mental illness						
	Diagnosing mental conditions						
	Managing various mental conditions						
	Counselling of family members and close relatives of the patient						
5	Eye clinic attachment						
	History taking of patient with eye condition						
	Examination of patient with eye condition						
	Diagnosing various eye conditions						
	Managing various eye conditions						
	Health education on prevention of eye diseases and conditions						
6	ENT clinic attachment						
	History taking of patient with ENT condition						
	Examination of patient with ENT condition						
	Diagnosing various ENT conditions						
	Managing various ENT conditions						
	Health education on prevention of ENT diseases and conditions						

Name of supervisor _____

Supervisor's comments _____

Signature _____ Date _____

Student's Signature _____ Date: _____

APPENDIX 7f:

RATING SCALE FOR HEALTH CENTRE PRACTICE

Student Name: _____

Admission Number: _____

Health Facility: _____

		Score					Remarks
		0	1	2	3	4	
	Nursing						
1	Bed making						
2	Observation of vital signs: temperature, pulse, respiration, blood pressure						
3	Maintenance of patients' personal hygiene						
4	Disinfection procedure						
5	Sterilization procedure						
5	Collection of specimen for investigation						
6	Requisition and recording of supplies						
7	Storage of equipment and supplies						
8	Carrying out wound dressing						
9	Drug administration						
	First Aid						
1	Ability to identify emergency cases e.g. hemorrhage, poisoning, shock, burns, asphyxia						
2	Provide First Aid treatment in above emergencies						
3	Identify and prepare appropriate materials for use in First Aid						
	Clinical Methods						
1	Ability to set scene for patient consultation						
2	Ability to take patient history						
3	Ability to perform physical examination						
4	Ability to collect specimen for investigation						
5	Ability to consult with other health workers on patient management						
6	Ability to counsel patients						
	PHC/CBHC						
1	Ability to provide health education to communities on various health issues						
2	Ability to carry out community diagnosis						
3	Ability to plan and organize for health talks						
4	Ability to identify cases of malnutrition						
5	Ability to manage nutritional deficiency cases appropriately						
	Environmental Health						
1	Ability to participate in protection of water sources						

		Score					Remarks
		0	1	2	3	4	
	in the community						
2	Ability to advice communities on simple methods of water treatment						
3	Ability to mobilize and participate in construction of pit latrines and advice on their use						
4	Ability to advice community on ideal homesteads						
	MCH/FP						
1	Ability to carry out growth monitoring of children						
2	Ability to participate in organizing immunization sessions						
3	Ability to participate in packing vaccines for outreach sessions						
4	Ability to participate in maintenance of cold chain						
5	Ability to provide counseling for Family Planning						
6	Ability to participate in provision of F/P services						
	Management						
1	Ability to participate as a team member in planning and management of health facility						
2	Ability to write activity reports appropriately						
	Ability to communicate to other team members on various health issues appropriately						
3	Ability to use epidemiological data and statistics in planning and management of health facilities						
4	Ability to requisition for equipment and supplies						

**APPENDIX 7g:
RATING SCALE FOR CLINICAL WARD PRACTICE**

Student Name: _____
 Index Number: _____
 Health Facility: _____

Introduction:

The following generic checklists are for assessment of every student during clinical Ward attachment in Hospital. They can be modified according to need. They are to be filled by the supervisor and submitted to the Academic Master at NHTI at the end of the attachment.

	Tasks	Scores					Remarks
		0	1	2	3	4	
	Surgical Ward						
1	Set scene for patient/client consultation						
2	Take surgical history						
3	Perform physical examination						
4	Make a provisional diagnosis and differentials						
5	Request for relevant investigations						
6	Identify cases for referral and take appropriate action						
7	Treat minor surgical conditions						
8	Identify specific instruments for various surgical interventions						
9	Perform minor surgery						
10	Perform counseling of patients and their relatives						
11	Manage patients pre-post operatively						
12	Ensure aseptic techniques in all surgical procedures and in the theatre						
13	Ensure cleaning, sterilization and disinfection of instruments						
14	Write patients' reports and keep confidentiality						
15	Administer local anaesthesia						

	Tasks	Scores					Remarks
		0	1	2	3	4	
	Medical Ward						
2	Take medical history						
3	Perform systematic physical examination						
4	Make a provisional diagnosis and differentials						
5	Request for relevant investigations						
6	Identify cases for referral and take appropriate action						
7	Appropriate management of medical conditions						
8	Give appropriate counseling and health education to patients and their relatives						
9	Write patients' reports and keep confidentiality						
10	Take history from a patient with mental illness						
11	Perform physical examination on a patient with mental illness						
12	Assess the patients' mental status						
13	Diagnose various mental conditions						
14	Manage various mental conditions						
15	Identify cases for referral to psychiatric unit						
16	Carry out counseling for both patients and relatives of mental patients						

	Tasks	Scores					Remarks
		0	1	2	3	4	
	Paediatric Ward						
1	Set scene for patient consultation						
2	Take paediatric history						
3	Perform physical examination						
4	Make a provisional diagnosis and differentials						
5	Request for relevant investigations						
6	Identify emergency for paediatric conditions						
7	Perform complete physical examination related to paediatric conditions						
8	Diagnose and treat neonatal conditions						
9	Monitor growth and development of children						
10	Identify infant feeding procedures and advice on correct feeding procedures						
11	Advice mothers on the six childhood immunizable diseases						
12	Store vaccines appropriately						
13	Immunise children						

	Task	Score					Remarks1
		0	1	2	3	4	
	Obstetric/Gynaecological Wards						
1	Set the scene for patients/clients consultation						
2	Take obstetrical and gynaecological history						
3	Perform obstetrical physical examination						
4	Perform gynaecological examination						
5	Identify normal and abnormal pregnancy						
6	Counsel and advice pregnant mothers						
7	Diagnose various medical conditions in pregnancy						
8	Identify and refer abnormal pregnancy						
9	Identify normal and abnormal labour and take appropriate action						
10	Identify various types of abortions and their management						
11	Identify obstetrical emergencies and refer						
12	Identify complications related to labour and take appropriate action (e.g. post partum haemorrhage, cord prolapse and presentation)						
13	Use obstetrical and gynaecological instruments in managing conditions related to pregnancy						
14	Identify gynaecological conditions and take appropriate management and referral						

		YEAR TWO																																										
		SEMESTER 1											SEMESTER 2																															
Activity		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Reporting	x																							x																				
Pharmacology II		8	8	8	8	8	8	8	8	8	8	8	8	10	10	10																												
HSM		4	4	4	4	4	4	4	4	4	4	4	4	6	10	10																												
Mental Health		6	6	6	6	6	6	6	6	6	6	6	6	6	8	10	4	4	4	2																								
E/Health II		4	4	4	4	4	4	4	4	4	4	4	4	2																														
Comm.Attachment																		26	26	26	28																							
Pathology		4	4	4	4	4	4	4	4	4	4	4	4	4	2																													
Microbiology II		4	4	4	4	4	4	4	4	4	4	4	4	2																														
Revision																						x																						
Semester exam																							x																					
Reporting																								x																				
Epidemiology																									4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Ophthalmology																									4	4	4	4	4	4	4	4	4	4	4	4	2							
ENT																									4	4	4	4	4	4	4	4	4	4	4	1								
Rotation in Special Clinics																																				3	8	10	10	30	30			
Medicine I																									4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Surgery I																									4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Paediatrics I																									4	4	4	4	4	4	4	4	4	4	4	4	2							
OB/GYN I																									4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
HSR I																									2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	4			
Revision																																										x		
Semester Exams																																											x	

