November 2012

KENYA MEDICAL TRAINING COLLEGE (KMTC)

DRAFT KMTC HR & I CURRICULUM FOR CERTIFICATE AND DIPLOMA COURSES

November 2012

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LIST OF ACRONYMS AND ABBREVIATIONS

CHIS	Community Health Information System
DHIS	District Health Information System
EMR	Electronic medical record
HIS	Health information system
HRI	Health Records and Information
HRIO	Health Records and Information Officer
ICT	Information and Communication Technologies
IT	Information Technology
KMTC	Kenya Medical Training College
MFL	Master Facilities List
MOH	Ministries of Health
TNA	Training needs assessment
TWG	Technical Working Group

KMTC HRI CERTIFICATE CURRICULUM

- **MODULE TITLE : ANATOMY AND PHYSIOLOGY**

Time: 140 **Hours** **14 CREDIT S**

Course organization for Theoretical Instruction
Course organization four Semesters Theory (Year 2)

Module Competence

This module is designed to equip a Health Records and Information learner with knowledge, skills and attitude in Anatomy and Physiology necessary for effective classification of diseases, conditions and medical procedures according to International Classification of Diseases and International Classification of Procedures in Medicine and effective communication and participation in research activities in health

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO ANATOMY AND PHYSIOLOGY	04
UNIT 2	HUMAN SKELETON AND JOINTS	14
UNIT 3	MUSCULAR SYSTEM	14
UNIT 4	CIRCULATORY SYSTEM	16
UNIT 5	RESPIRATORY SYSTEM	14
UNIT 6	DIGESTIVE SYSTEM	16
UNIT 7	URINARY SYSTEM	10
UNIT 8	NERVOUS SYSTEM	14
UNIT 9	REPRODUCTIVE SYSTEM	14
UNIT 10	ENDOCRINE SYSTEM	12
UNIT 11	SENSORY ORGANS (SKIN, NOSE, TONGUE, EAR AND EYE)	16

Module Outcomes

At the end of the module the learner will be able to:

1. Define and state the common terms used in anatomy and physiology
2. Describe the embryology processes
3. Name major structures of the human body organs and systems
4. Describe the human body cavities
5. Define the term skeleton, list types of human skeleton and bones forming the human skeleton
6. Describe the anatomy and physiology of the human skeleton and various classifications of joints

7. List and define the various types of human body structures, organs and systems
8. Describe the anatomy and physiology of human body systems (muscular, circulatory, respiratory, digestive, urinary, nervous, reproductive and endocrine)
9. Describe the anatomy and physiology of the sensory organs (skin, nose, tongue, ear and eye)
10. Use diagrammatic illustrations and explain the various human body organs and systems
11. Demonstrate ability to locate the various organs in the living body, cadaver or in models

Module Content

This module entails introduction to Anatomy and Physiology, description of human skeleton and Joints, Muscular, Circulatory, respiratory, digestive, urinary, nervous, reproductive, endocrine systems and sensory organs

- **MODULE TITLE : PATHOLOGY**

Time: 100 **Hours** **10 CREDIT S**

Course organization for Theoretical Instruction
Course organization four Semesters Theory (Year2)

Module Competence
This module is designed to equip a Health Records and Information learner with knowledge, skills and attitude in pathology necessary for effective classification of diseases, conditions and medical procedures according to International Classification of Diseases and International Classification of Procedures in Medicine and effective communication and participation in research activities in health.

UNITS		**HOURS**
UNIT 1	GENERAL CONCEPTS OF DISEASE AND PRINCIPLES OF DIAGNOSIS	02
UNIT 2	INFLAMMATORY PROCESS AND ITS ROLE IN DISEASE AND INJURY	06
UNIT 3	BODY IMMUNITY	12
UNIT 4	ROLE OF PATHOGENIC MICRO ORGANISMS AND PARASITES IN DISEASE	12
UNIT 5	COMMUNICABLE DISEASE TRANSMISSION AND CONTROL	12
UNIT 6	CONGENITAL AND HEREDITARY DISEASE	10
UNIT 7	NEOPLASMS	08
UNIT 8	ABNORMALITIES OF BLOOD COAGULATION & CIRCULATORY DISORDERS	12
UNIT 9	MAJOR DISEASE CONDITIONS RELATED TO SPECIFIC BODY SYSTEM & BASIC DIAGNOSTIC TESTS	12
UNIT 10	TREATMENTS COMMONLY USED	12

Module Outcomes

At the end of the module the learner will be able to:

- Discuss general concepts of disease and principles of diagnosis
- Describe the inflammatory process and its role in disease and injury
- Describe cell mediated and humeral immunity.
- Describe the role of pathogenic micro organisms and parasites in disease
- Describe communicable disease transmission and control
- Describe congenital and hereditary disease causes and manifestations
- Describe types and characteristics of neoplasm and modalities of treatment
- Describe the abnormalities of blood coagulation and circulatory disorders
- Describe major disease conditions related to specific body system and basic diagnostic tests
- Describe treatments commonly used

Module Content

This module entails explanation of general concepts of disease and principles of diagnosis, inflammatory process and its role in disease and injury, body immunity, role of pathogenic micro organisms and parasites in disease, description of communicable disease transmission and control, congenital and hereditary disease, neoplasm, abnormalities of blood coagulation & circulatory disorders, major disease conditions related to specific body systems and identification of basic diagnostic tests.

General concepts of disease and principles of diagnosis:

Characteristics of disease process, basic principles of diagnosis, use of diagnostic tests and procedures

Inflammatory process and its role in disease and injury:

Characteristics and clinical manifestation of an acute infection, outcomes of an inflammatory reaction and comparison between infection and inflammation

Body Immunity:

Role of lymphocytes in the immune response, compare immunity and hypersensitivity, classes of antibodies and allergic manifestations and methods of treatment

Role of pathogenic micro organisms and parasites in disease:

Major groups of pathogenic bacteria, mechanism by which antibodies inhibit the growth of bacteria, mode of action of virus infection and the body's response, spectrum of infections caused by fungi and common parasitic infestations and how they are acquired

Communicable disease transmission and control:

Communicable disease transmission and control, common sexually transmitted diseases, their clinical manifestation, complication and methods of treatment

Congenital and hereditary disease:
Common causes of congenital malformation, abnormalities of sex chromosomes and their clinical manifestation, common genetic abnormalities

Neoplasms:
Characteristics of benign and malignant tumors, principle modalities of cancer treatment

Abnormalities of blood coagulation & circulatory disorders:
Common causes of disturbance in haemostasis, causes and effect of arterial and venous thrombosis and factors disturbing the regulation of circulation

Major disease conditions related to specific body system and identify basic diagnostic tests:
Cardiovascular and circulatory system, respiratory system, male and female reproductive system, including those occurring during pregnancy, urinary system, gastrointestinal system, endocrine system, nervous system, musculoskeletal system

Treatments commonly used:
Pharmacology, revision of all the diseases affecting the various human body systems

- **MODULE TITLE : FIRST AID**

Time: 48 **Hours** **5 CREDIT S**

Course organization for Theoretical Instruction
Course organization four Semesters Theory (Year 2)

Module Competence
This module is designed to enable a Health Records and Information learner to apply First Aid knowledge and skills in assessment of emergency situations and management of casualties in emergency situations.

UNITS		**HOURS**
UNIT 1	CONCEPT OF FIRST AID	04
UNIT 2	ATTRIBUTES OF A FIRST AIDER	14
UNIT 3	HUMAN BODY SYSTEMS	14
UNIT 4	DRESSINGS AND BANDAGES	16
UNIT 5	RESPIRATION	14
UNIT 6	RESUSCITATION	16
UNIT 7	CIRCULATION	10
UNIT 8	FRACTURES AND SPRAIN	14
UNIT 9	SHOCK, COMPRESSION, CONCUSSION AND CONFUSION	14
UNIT 10	BURNS, SCALDS AND POISONING	12
UNIT 11	ROAD TRAFFIC ACCIDENTS	16

Module Outcomes
At the end of the module the learner will be able to:
- Describe and apply the principles and practice of First Aid
- Display the qualities of a good first Aider
- Explain the structures and functions of the human body
- Apply triangular and roller bandages on casualties
- Explain respiration and treat asphyxia, fainting and shock
- Explain and apply methods of resuscitation
- Explain how the circulatory system works
- Take a person's pulse, temperature, arrest bleeding and measure a person's respiration rate

- Identify different types of fractures, injuries to muscles, ligaments and treat the injury properly
- Describe various injuries to the nervous system and treat them
- Treat burns, scalds and poison
- Explain the procedure of carrying out in handling a road accident victim
- Explain and use different methods of transporting casualties.
- Explain procedures followed in aiding an emergency delivery

Module Content
The application of First Aid knowledge and skills in assessment, diagnosis and management of casualties in emergency situations

Concepts of First Aid:
Definition of First Aid, principles of first Aid, scope, practice, aim, determining diagnosis through DRABC, AMEGA and procedure of examination

Attributes/ Qualities of a First Aider:
Characteristics of a good first aider, attitudes of a good first aider and application

Overview Human Body systems:
Statement of the human body systems and organs therein (***Also refer to Anatomy and Physiology Objectives***)

Respiration:
Description of mechanism of respiration, conditions of respiratory system, their causes, and management

Circulation:
Description of mechanism of circulation, conditions of circulatory system, causes, and management
Organs forming circulatory system
Recognition of: Pulse rate, Temperature level, Bleeding and Breathing rates
Application of skills in controlling internal and external bleeding, swelling and guarding against shock

Resuscitation:
Definition of resuscitation
Types of resuscitation in adults and children: Manual and electrical
Various methods of respiration in adults: Mouth to mouth, Mouth to Nose, Mouth to Mouth and Nose, and Mouth to Stoma
Various methods of respiration in children: Mouth to Mouth, Mouth to Mouth and Nose, and Mouth to Stoma

Fractures and Sprain:
Definition of fractures, dislocation, sprains and strains, sign and symptoms of fractures, types of fractures (open and closed fractures), management of sprained or torn muscles and ligaments and fractures

Casualty Incident Management
Definition and management of incidences
Practical session: recovery position-types, systematic steps, mode of seeking help, messages to ambulance crew and computation of casualty handing over message

Burns, Scalds and Poisoning:
State the signs and symptoms of burns, scalds and poisoning
Management of various types of burns, scalds and poisoning

Dressings, Bandages and application in emergency situations:
Definition of a dressing and bandage, description of a triangular and roller bandages, application of a dressing, functions of a dressing, application of a roller and triangular bandages

Lifting and carrying casualties
Application of lifting and carrying casualty methods and procedures:
Methods involving one first aider: human crutch, drag method, fireman's lift, pick – back
Methods involving multiple first aiders: four handed seat, chair lift, stretcher-dressing and loading casualties into ambulance

Methodology (Instructional Strategies)

- Lecture
- Group discussion
- Application exercises and practices in a classroom
- Assignments
- Independent study
- Off- and on-job-training integrated
- Paying visits and attachments to health facilities

Assessment And Evaluation Methods

- ***Theory paper examination:***
  - ✓ Multiple Choice Questions (MCQs)
  - ✓ Matching variable statements
  - ✓ True or False answer questions
  - ✓ Essay administered questions
- ***Practical examination***:
  - ✓ Objective Structured Practical Examination (OSPE)
  - ✓ Demonstration

REFERENCES

Anatomy and Physiology
Ross and Wilson, Anatomy and Physiology in health and illness, 11th Edition

Pathology

Merck manual
Medical dictionary
Muir's text book of Pathology

First Aid
St. John's Ambulance, Essentials of First Aid, 10th Edition
St. John's Ambulance, First Aid at work

- **MODULE TITLE : MEDICAL DATA CLASSIFICATION**

Time: 60 **Hours** **06 CREDIT S**

Module Competence
At the end of the module the learner will be able to:

1. Define disease classification and International classification of procedures in Medicine (ICPM).
2. Outline the historical development of international classification of Diseases and International classification of Medical procedures.
3. Explain types of classification of diseases, operations and procedures
4. Explain the purpose of disease classification.
5. List and describe the 21 major categories (Special groups of conditions and body systems).
6. Describe the arrangement of ICD and ICPM
7. Describe the procedure of coding, indexing
8. Describe abbreviations, conventions, punctuation as used in the ICD.
9. Define and describe diagnostic index, the uses, methods of storage and retrieval.
10. Demonstrate ability to code and index diseases and medical procedures according to ICD and ICPM.
11. Demonstrate ability to create (manual and electronic index); use the diagnostic index.
12. Describe the various medical terms used in coding and classifying diseases.
13. Differentiate between primary and secondary diagnosis (Dual Classification).
14. Display tidiness, legibility, and accuracy in completing the index.
15. Demonstrate the ability to generate, analyse and interpret information
16. Demonstrate ability to edit and audit a case record.
17. Describe procedures in data security and confidentiality

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO ICD AND ICPM	04
UNIT 2	STRUCTURE OF THE CLASSIFICATION	04

UNIT 3	PURPOSE OF CLASSIFICATION, CODING, AND INDEXING	04
UNIT 4	TWENTY-ONE MAJOR CATEGORIES OF ICD	10
UNIT 5	ORGANIZATION OF ICD AND ICPM	04
UNIT 6	PROCEDURES OF CODING AND INDEXING	04
UNIT 7	ABBREVIATION, PUNCTUATION AND OTHER CONVENTION	04
UNIT 8	DIAGNOSTIC INDEXING	04
UNIT 9	CERTIFICATION	06
UNIT 10	RULES AND GUIDELINES FOR MORBIDITY AND MORTALITY	06
UNIT 11	QUALITY IN DISEASE CLASSIFICATION REPORTS	06
UNIT 12	SECURITY, CONFIDENTIALITY & ETHICS (DATA PROTECTION)	04
UNIT 13	STATISTICAL PRESENTATION	06

UNIT 1: Introduction to ICD and ICPM - Definition of ICD and ICPM, Importance of the two systems, Historical development of ICD and ICPM, Prominent earlier classifications, Current ICD and ICPM

UNIT 2 Structure of the classification - General arrangement of ICD and ICPM operations and their application, Principles of coding diseases, Principle of coding procedures in medicine (operations), Principles of coding other health information records.

UNIT 3: Purpose of classification coding and indexing –Standardization, Management, planning, research and teaching, Statistical analysis, Systematic arrangement of health information.

UNIT 4: Seventeen categories of ICD – Introduction to 21 Chapters and the categories

Tabular list of inclusions and four-character subcategories

I	Certain infectious and parasitic diseases
II	Neoplasms
III	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
IV	Endocrine, nutritional and metabolic diseases
V	Mental and behavioural disorders
VI	Diseases of the nervous system
VII	Diseases of the eye and adnexa
VIII	Diseases of the ear and mastoid process
IX	Diseases of the circulatory system
X	Diseases of the respiratory system
XI	Diseases of the digestive system
XII	Diseases of the skin and subcutaneous tissue
XIII	Diseases of the musculoskeletal system and connective tissue

XIV	Diseases of the genitourinary system
XV	Pregnancy, childbirth and the puerperium
XVI	Certain conditions originating in the perinatal period
XVII	Congenital malformations, deformations and chromosomal abnormalities
XVIII	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified
XIX	Injury, poisoning and certain other consequences of external causes
XX	External causes of morbidity and mortality
XXI	Factors influencing health status and contact with health services

UNIT 5: Organization of ICD and ICPM - Organization of Vol.1 and Vol. 11 of ICD books, Organization of both Vol.1 and Vol. 11 of ICPM, Tabular list Vol. 1, Diseases, nature of injury, Supplementary classification, Comparison of the two editions, External cause of injury, Alphabetical index Vol. 11, Diseases, injuries and supplemental classification, Adverse effects of drugs and other chemical substances, Comparison of the two editions, Arrangement of ICPM Vol.1 and Vol. 11, Alphabetical index, . Numerical index of procedures in medicine

UNIT 6: Procedures of coding and indexing - Primary arrangements (Indices and Modifier), Eponyms (Main entries, Modifiers, Adjectives, Comparison of previous editions and present editions). Tabular list, Category codes, Use of category codes, Use of more than one code, Combined category code, Use of inclusions and exclusions, Provisional diagnosis, Dual classification, Coding of neoplasms (Classification, Grouping, Specific coding instruction, Special consideration, Un-determined primary site, Metastic site, Suspected neoplasm rule out, Use of M codes, Mental disorders, combined category codes, Mental conditions and physical condition, Intended primarily for psychiatric conditions, Use of two codes to express mental and physical condition, Mental retardations, Forth digit , subdivisions), Obstetric coding (Pregnancy, Normal, Completion of pregnancy, Combine category code for certain conditions complicating pregnancy, Associated conditions- Abortion, Deliveries, Normal complicated, Premature, multiple and still birth Obstetrical procedures, Tabular list of operation, Spontaneous deliveries, Post partum condition- Definition, Complication, Supplementary classification codes.

UNIT 7: Uniform abbreviation, punctuation and other convention.- Abbreviations – NOS, NEC, V Code, M – Code, E – Code), Functions (Asterisk, Colon, Parenthesis, Brackets, Daggers), Inclusion and Exclusion

UNIT 8: Diagnostic indexing: Definition of indexing, Types of records to be indexed, - Basic identification particulars required for indexing health record, Procedure of indexing, Review preparation of computer in-put (e-Coding), procedures of filing index cards, numerical filing of cards, professional ethics and legal requirements of health records practice and the official secrets act, Notification of vital events (Birth and Deaths).

UNIT 9: Certification: clinical judgment in completing the medical certificate of cause of death, limit the range of diagnoses, accuracy and usefulness of the report.

UNIT 10: Rules and guidelines for morbidity and Mortality: causes of death recorded, selecting the underlying cause, determine the originating antecedent cause of death, General Principle of selecting the guiding rules.

UNIT 11: Security, Confidentiality & ethics
Definition of data security and confidentiality, Data security, Data confidentiality,

UNIT 12: Statistical presentation: Definition of terms, sources of obtaining mortality data, selection, reporting requirements related to fetal, perinatal, neonatal, infant mortality, presentation and statistical analysis.

LEARNING METHODS

- Lecture,
- Focus group Discussion,
- Brainstorming
- Student centred
- Self-Directed Learning
- Practicum integrated with other modules
- Practices/exercises

Assessment Methods and Schedules

- ✓ For theory papers, the questions will be MCQs, matching, true or false and essay administered in the mid semester, end of semester and final qualifying examinations.
- ✓ Practical examinations will be based on OSPE type in the prescribed Practical Assessment centres including but not limited to National, provincial and District hospitals.

Assessment Conditions

As per KMTC examination policy

REFERENCES

ICD 10

ICPM

- **MODULE TITLE : MEDICAL TERMINOLOGY**

Time: 60 **Hours** **06 CREDIT S**

Module Competence

- Explain the scope and nature of terminology used in medicine and allied professions.
- Identify words that describe general anatomical features, including disorders.
- Identify words which describe medical tools, equipment and procedures.
- Identify words that describe pharmacological terms.
- Identify words that describe physiological and anatomical features in the musculoskeletal system, including disorders.
- Identify words that describe physiological and anatomical features in the cardiovascular, lymphatic and immune systems, including disorders.
- Identify words that describe physiological and anatomical features in the respiratory and reproductive systems, including disorders.
- Identify words that describe physiological and anatomical features in the digestive and excretory systems, including disorders.
- Identify words that describe physiological and anatomical features in the skin, including disorders.
- Identify words that describe physiological and anatomical features in the nervous and sensory systems, including disorders.

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO MEDICAL TERMINOLOGY	25
UNIT 2	BODY SYSTEMS	20
UNIT 3	DISEASE AND TREATMENT	15

Module Outcomes

By the ends of each unit the student will be able to:-

- Explain the scope and nature of terminology used in medicine.
- Identify words that describe general anatomical features, medical tools, equipment and procedures.
- Identify words that describe pharmacological terms
- Identify words that describe physiological and anatomical features in the body parts and systems.

Module Content

Unit 1: Definition of medical terminology, Importance of medical terminology, Origin (Historical) of medical terms, Component part of medical terms,

Commonly used prefixes, suffixes, stem, medical abbreviation, signs, symbols, in diseases and procedures in medicine, Component parts of medical, pharmacological terms, Examples of prefixes, suffixes and terms, Case study.

Unit 2: Describe terminology by body system, Terms related to body systems, disease and conditions of each body system, terms related to diagnostic procedures of each body system, Abbreviations used in each body system, Case study.

Unit 3: Describe types of Diseases, Infectious, Responses to Diseases, Word Part Pertaining to Diseases, Diagnosis and Treatment, Surgery, Cancer, Case study.

Learning Methods

- Lecture,
- Focus group Discussion,
- Brainstorming
- Student centred
- Self Directed Learning
- Practicum integrated with other modules
- Practices/exercises

Assessment Methods and Schedules

- For theory papers, the questions will be MCQs, matching, true or false and essay administered in the mid semester, end of semester and final qualifying examinations.
- Practical examinations will be based on OSPE type in the prescribed Practical Assessment centres including but not limited to National, provincial and District hospitals.

Assessment Conditions

As per KMTC examination policy

REFERENCES

1. F.A Davis, Taber's Cyclopaedic Medical Dictionary, 14th edition, 1981, Philadelphia
2. Thomas C., Taber's Cyclopaedic Medical Dictionary, 6th edition, 2001, Philadelphia
3. Barbara A. Gylys, et. al, Medical Terminology, A Body System's Approach, 5th edition, 2005, Philadelphia
4. Peggy C. Leonard, Quick and Easy Medical Terminology, 2nd edition, 1995, by W.B Saunders Co.
5. Internet Search Engine for Referent.

- **MODULE TITLE : HEALTH RECORDS MANAGEMENT**

Time: 194 **Hours** **20 CREDITS**

MODULE COMPETENCE

This module is designed to equip the learner with knowledge, skills and positive attitude to effectively and efficiently manage Health Records

MODULE UNITS		**HOURS**
UNIT 1	INTRODUCTION TO HEALTH RECORDS MANAGEMENT	4
UNIT 2	RECEIVING, REGISTRATION AND INITIATION OF HEALTH RECORDS	8
UNIT 3	CREATING AND MAINTAINING HEALTH RECORDS INDICES	8
UNIT 4	SCHEDULING AND FOLLOW UP PREPARING OF IN/OUT CLINIC, PATIENTS	14
UNIT 5	ADMITTING & DISCHARGING PATIENTS/CLIENTS	10
UNIT 6	STORAGE AND RETRIEVAL OF HEALTH RECORDS	20
UNIT 7	ACQUIRING AND MAINTAINING HEALTH RECORDS EQUIPMENTS	20
UNIT 8	LEGAL ASPECTS OF HEALTH RECORDS	20
UNIT 9	MANAGING SPECIAL RECORDS	20
UNIT 10	ESTABLISHING A HEALTH RECORDS DEPARTMENT IN A HEALTH CARE FACILITY	20
UNIT 11	DEVELOPING AND DESIGNING HEALTH RECORD FORMS	15
UNIT 12	ENSURING QUALITY ASSURANCE IN HEALTH CARE SERVICES	15
UNIT 13	INTRODUCTION TO ELECTRONIC HEALTH RECORDS	20

MODULE OUTCOMES

1. Give an overview of health records discipline and its organization
2. Describe the procedures used in reception, registration and initiation of the patient/client records.
3. Describe the appointment systems
4. Describe the various methods of creating and maintaining health records indices.
5. Display ability to create and maintain health records.
6. Explain the various procedures of clinic preparation.
7. Describe the admission and discharge procedures.
8. Maintain an efficient system of storage, retrieval and control of health records.
9. Explain the various systems of storage and retrieval of health records.
10. Describe different methods of acquiring and maintaining health records equipment, health records forms and office stationery.
11. Demonstrate ability to acquire health records forms equipment office stationery and supplies.
12. Describe legal aspects of health records.
13. Enumerate the various Notifiable diseases
14. Describe various types of special records.
15. Describe how to establish a Health Records Department.
16. Educate the community and other health workers on the importance of health records.
17. Describe how to design and develop to develop and design health record forms.
18. Appreciate the importance of Quality Assurance in health care.
19. Display thoroughness and efficiency in managing health records.
20. Appreciate the importance of confidentiality in dealing with health records.
21. Definition of Electronic health Records and Electronic Medical Records System
22. Explain the concepts of Electronic Health Records system

Module Content

UNIT 1: Introduction to Health Records Management

Definition of health records, brief historical background ,uses and value ,organization of health records department, functions of a health records department, relationship between health records department and other health disciplines, qualities of a good health records technician, documents contained in a health record, health records ethics, duties and responsibilities of medical records technician.

UNIT 2: Receiving, Registration and Initiation of Health Records

Procedures of receiving patients, decision making and interviewing, qualities of a good receptionist in in/out patient and accidents and emergency units, effective communication and listening skills, procedures of registering patients, types of

registration – centralized and decentralized, unit system-(alphabetical, chronological, straight numerical),attendance card, master index, case record, classification of records, pre-registration procedures of document, review appointment system,

UNIT 3: Creating and Maintaining Health Records Indices

Definition and description of various health records indices, importance of health records indices. (*patient master , in-patient waiting list, diagnostic and operations indices*), various methods of filing indices, procedures of creating various types of health indices, identification details.(*record the details, sort the index, file the index, alphabetical, numerical),*ways of maintaining health records indices and equipment's used in storage.(sorting file, file cabinet, strip index),trays, ICD. Books, computers, microfilming.

UNIT 4: Scheduling And Follow Up & Preparing Of In/Out Clinic, Patients

Definition of scheduling, concept and follow-up, purpose, types of appointment system, (centralized and de-centralized appointment system), Various procedures of clinic preparation - (new patient, re-attendances, ward discharges), Tracing of the records to various destination.-(completion of tracer cards, sorting of tracer cards, retrieval of the notes, review filing and editing procedures.), verification of the completeness of the file, compilation of the records checklist form.

UNIT 5: Admitting & Discharging Patients/Clients

Admission procedures: Normal emergency and waiting list admissions, Collection and registration of identification particulars, Initiation of the in-patient record. (Bed bureau)
Discharge procedures, Collection, compilation, analysis, dissemination and verification of returns, Editing of Health Records, Coding and indexing procedures, Registration of births and deaths, Review appointment procedures i.e. ward discharges, Health records audit.
Symptoms of various conditions, Review reception procedures, Review relevant legal procedures for admission and discharge, relevant admission and discharge forms.
Review of Government office routine.

UNIT 6: Storage and Retrieval health Records

storage of medical records; filing system: - (*alphabetical, numerical, terminal digit, chronological, automation);*filing procedures of health records ;security of health records; tracing systems:- (*definition, tracing procedures, common tracer cards, library tracer card, personal tracer card, other tracing systems e.g. Control registers.;* confidentiality of health records; review of editing procedures of health records; equipment required in storage and retrieval (*cabinets, shelves, trolleys, kik ,tools/ladders, chairs, box files, tables, pigeon holes, computer, microfilm etc.* Preservation of health records (*retention period, workmen's compensation act, weeding, date ladder)*

UNIT 7: Acquiring and Maintaining Health Records equipment

Acquisition procedure; Use of accountable forms; Maintenance of inventories; Types of health records equipment: (*Medical stationery, Office equipment, Office stationery)* Storage and control of health equipment and supply expendables, non-expendables; Maintenance of health records equipment: - (Repair, Contracting for service of equipment)

UNIT 8: Legal Aspects of Health Records

Concepts of professional ethics and Legal aspects of medical records ; confidentiality, security, ownership, retention, disclosure) *higher duty, court cases, insurance claims:* various acts; **Public health act**: - (list of notification diseases med. 26: procedure of disposal of dead bodies, health & safety, notification of infectious diseases: **public records act** retention and disposal or records : **safety radiation act**: **mental health act:** admission and discharge procedures, government official secret act- *confidentiality*, civil registration act- *procedures of notification of births and deaths*, workmen's compensation act -*procedures of workman's compensation,* criminal procedure code; -(*completion of p3 forms, post mortems, consent for operations, release of information (eg. In postmortems*),

UNIT 9: Managing Special Records

Importance of special records, types of special records (psychiatric records, maternity records, radiological records, accident and emergency records, MCH/FP records, infectious diseases record, procedures for completion and management of special record, review storage and retrieval as pertaining to special records, confidentiality of special records, review legal aspects of medical records, security and control procedures as relates to special records procedures.

UNIT 10: Establishing a Health Records Department in a Health Care Facility

Needs assessment – (demography, hospital workers, clients), procedures in establishing a health records department, review storage and retrieval of health records, organization of various the sections, review admission and discharge procedures, concept of team work, commissioning procedures for health records department

UNIT 11: Developing And Designing Health Record Forms

Basic principles of form design, importance of forms design standardization of forms, qualities of a good form, formatting of health records forms (layout/size),various health records forms used in health records department, pre-testing of health records forms reproduction process using:- (government process of reproduction/acquisition ,private printers, health facility resources), costing of printing work, equipment needed for development and designing of health records forms, storage, control and retrieval of forms

UNIT 12: Ensuring Quality Assurance in Health Care Services

Definition of Quality Assurance, Importance of Quality Assurance, Method of Quality Assurance in health care records, and Definition of health records auditing concept, Auditing of health records – process

UNIT 13: Introduction to Electronic Health Records

Define EMR, Role of Electronic Medical Records system, Privacy and security of EMR key EMR functional requirements in Kenya; demonstrate how an EMR is used to improve public Health

Teaching Methodology

1. Lectures
2. Group discussions
3. Demonstration
4. Role play

Module Assessment

Assessment Methods and Schedules

1. For theory papers, the questions will be MCQs, matching, true or false, filling the blanks, short answer questions and essay administered in the mid semester, end of semester and final qualifying examinations.
2. Practical examinations will be based on in National, provincial and District hospitals

REFERENCES

1. Huffman, Medical Record Management, 9th edition, 1990, Berwyn, Illinois
2. Mervat Abdelhak, et.al, Health Information: Management of a Strategic Resource, 2nd edition, 2001, USA
3. Merida L. Johns, Health Information Management Technology, An Applied Approach, 2nd edition, AHIMA, 2007, Chicago, Illinois
4. Michelle A. Green, et. al, Essentials of Health Information Management, Principles and Practices, 2005, USA
    a. WHO, Design and Implementation of Health Information Systems, 2000, Geneva
5. Huffman, health information management 2002, Berwyn, Illinois
6. Kathleen M. Latour et al health information management 2nd edition 2006 Chicago Illinois
7. Medical Records Organization and Management GD Mogle, 1st edition 2006

- **MODULE TITLE : HEALTH STATISTICS**

Time: 190 **Hours (THEORY)** 96 **Hours (PRACTICAL)** **19 CREDIT S**

MODULE COMPETENCES:

To enable the learner to collect, compute, analyze, interpret and disseminate health data for better healthcare service delivery.

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO HEALTH STATISTICS AND DATA COLLECTION	22
UNIT 2	STANDARD HEALTH FACILITY ADMINISTRATIVE STATISTICS AND FORMULAE	24
UNIT 3	DATA PRESENTATION	72
UNIT 4	MEASURES OF CENTRAL TENDENCY AND DISPERSION	48
UNIT 5	VITAL HEALTH STATISTICS	24
UNIT 6	PRACTICUM	48 hours

Module outcomes

1. To enable the learner to acquire the basic necessary statistical skills for evidence decision making
2. To acquire basic necessary skills for health data presentation
3. To acquire basic necessary ICT skills for health data analysis and processing
4. To acquire basic skills in health research methodology

DETAILED

1) UNIT 1 Introduction to Health Statistics and data collection (22 Hrs)

1. Definition of statistics, its value and importance
   Definitions, Types, Value/uses, Importance
2. Basic Research Methodology
   Introduction; key terms and steps related to research, Identification of a Research problem, Definition of a problem, Sources of data; primary and secondary, Identification of the population from which the problem pertains, Definition and description of the population
   Review of literature -Critical review of literature
   Justification for the study
   Formulation of objective
   Research question
3. Methods of data collection
   i. Direct observation
   ii. Interviewing
   iii. Abstraction from published statistics
   iv. questionnaires

4. Data Collection Tools
    i. Description of the tools
    ii. Principles of Preparations of tool
    iii. Interview schedules
    iv. Questionnaires.
5. Sampling
    i. Definition of a sample
    ii. Description of sampling methods: Random, Systematic, Stratified, Multi-stage, Cluster and Quota sampling
6. Pretesting 0f Data collection tools (Instruments)
    i. Definition
    ii. Purpose
    iii. Procedure
7. Data Cleaning,
    i. Definition
    ii. purpose,
    iii. importance,
    iv. Procedures.
    v. Different methods
8. Data organization
    i. Definition
    ii. Description of different methods; Classification, sorting, Aggregation/summarization.
    iii. Importance

2) UNIT II: Health Facility Administrative Statistics 24 Hrs

1. Introduction
    i. Definitions Related terminologies
    ii. Importance of hospital Administrative statistics
2. Calculation of standard health facility Administrative statistics.
    i. Measurements i.e. dropout rate
    ii. Hospital activity analysis

3) UNIT III Data Presentation (72 Hr)

1. Data
    i. Definition,
    ii. Purpose,
    iii. Importance
    iv. Characteristics of data
    v. Types
2. Presentation
    i. Definition and description
    ii. Purpose
    iii. Importance
3. Description of Data presentation Methods
    i. Narrative
    ii. tabulation
    iii. Simple tables
    iv. Multiple column
    v. Principles of table construction
    vi. Array presentation
    vii. Frequency distribution
    viii. Cumulative frequency
4. Different ways of presentation of data in charts and graphs.
    i. Description
    ii. Types
    iii. Principles of Construction
    iv. Simple bar charts
    v. Component bar charts
    vi. Percentage component bar charts
    vii. Multiple bar charts
    viii. Pie charts
    ix. Graph
    x. Histograms
    xi. Frequency polygon curve
    xii. Ogive
    xiii. Break-even charts
5. Computer application in Data presentation and Processing

4) UNIT III Measures of Central Tendency (48 Hrs)

1. measures of central tendency
    i. Measures
    ii. Calculation
2. Mean
    i. Simple Arithmetic Mean
    ii. Weighted arithmetic mean
    iii. Arithmetic mean of ungrouped frequency distribution
    iv. Arithmetic mean of a frequency distribution
    v. Mean deviations from the mean
    vi. The geometric mean
3. mode

i. Computation
ii. Finding using histogram
iii. Obtaining mode of a grouped frequency

4. Median
    i. Calculation
    ii. Ungrouped data
    iii. grouped data
5. Measures of dispersion
    i. Definition and description
    ii. Calculation
    iii. Range
    iv. Quartiles
    v. Deciles
    vi. Standard deviation
6. Electronic Data Processing
    i. Definition and description
    ii. Advantages
    iii. Basic statistical packages
7. Computer application in Data analysis and Processing

5) UNIT V : Vitals Health Statistical (24 Hrs)

1. Definition and description
2. Importance
3. the various vital and health statistics rates/Type of vital statistics
    i. Morbidity rate
    ii. Fertility rate
    iii. Crude birth rate
    iv. Infant mortality rate
    v. Crude death rate
    vi. Incidence and prevalence rates
4. Formulae for calculating vital statistics
5. Computer application in Vital Health Data analysis and Processing

Learning Strategies

- Learner-centred
- Discussions
- Theory and practical training integrated
- Consideration of both individual and group based practices/exercises
- Holistic project
- Lecture
- Group discussion
- Visiting health facilities
- Application exercise in a classroom
- Practical exercise
- Assignments
- Independent study of specified topics

Resource Conditions

- Training-, Teaching- and Learning Materials
- Trainer's Guide
  Reference manuals and books
- Learners Guide
  Handout
  Text books
- Reference Manual and Reference Books
  Harper, Statistics, 6th edition,
  Koch G., Basic Applied Statistics and Analysis, Delmar Thompson publishers, 2nd edition, 2000,
  HIS Policy
  ICT Policy

Module Assessment

- Assessment Methods and Schedules

1. For theory papers, the questions will be MCQs, matching, True or false and easy administered in the mid semester, end of semester and final qualifying examinations.
2. Practical examinations will be based on OSPE type both National, provincial and District

- **MODULE TITLE : INTRODUCTION TO COMPUTERS IN HEALTH**

Time: 90 **Hours** **09 CREDIT S**

Module Objective

To equip the learner with basic knowledge, skills and attitude to enable them integrate the use computers in day to day activities in the health facility.

Specific Outcomes

1. To explain the different components of a computer system
2. To be able to set up and operate a computer
3. To apply basic security measures when using computers
4. To use computers for word processing
5. To use computers for data management
6. To use computers for communication

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO COMPUTERS	30
UNIT 2	COMPUTER APPLICATIONS	60

Module Contents **Hours**

Unit 1: Introduction to computers 30

1. Introduction 4
    a. Definition of computers related terms
    b. Basic historical development of computers
    c. ICT Kenya Policy- (e-governance/e-health
    d. Advantages and disadvantages of computers
    e. Computer application areas
2. Components of a computer 6
    a. Input devices
    b. Processing devices
    c. Output devices
    d. Storage devices
3. Introduction to networks and network devices 4
    a. Definition of networks
    b. Advantages and Disadvantages of networks
    c. Types networks
    d. Network devices
4. Computer software 2
    a. System software

b. Application software

5. Practical 14
   a. Setting up computers
   b. Booting process
   c. Configure computers for use
      i. Desktop setting
      ii. Control panel
      iii. Basic network configuration
      iv. User administration
      v. Ports and device drives
   d. Computer security and privacy; passwords creation and management, protecting your computer using passwords, protecting files using passwords, virus and antivirus management.

Unit 2: Computer applications 60

1. Windows 10

   Folders and file management, creating folders, creating files, sub folders, operating systems , moving files and folders, saving , renaming and deleting files, windows explorer, task bars and shortcuts, archiving of files, installing software using the installation wizard

2. Word processing 20

   Creating a word document, editing and formatting, tables, equation editors, headers and footers, word statistics, mail merge and envelopes, spell checker and thesaurus, footnotes and end notes, printing of word documents, tracking changes in a document, object linking and embedding, password protect document

3. Spreadsheets 20

   Creating Workbooks and worksheets, editing, cell referencing, filters, sorting, formulas, graphs, pivot tables/graphs, formatting values, worksheets, linking of sheets, importing and exporting data in excel, protecting worksheets/workbooks, formatting excel document for printing

4. Internet and email 10

   Web browsers, URLs, IP and proxy setting, search engines, bookmarking, downloading and saving documents. Setting up email clients, opening an email account, composing and formatting an email, attachments, address books, schedules/appointment, email etiquette (language, acknowledgement etc.); collaboration tools (skype, Instant messaging tools, team viewer)

Learning Strategies/Methods

- Learner-centred
- Flexible
- Theory and Practical training integrated
- Consideration of both individual and group based practices/exercises

- Holistic project
- Lecture
- Group discussion
- Visiting health facilities
- Application exercise in a classroom
- Practical exercise
- Assignments
- Independent study of specified topics

Resource Conditions

- Training-, Teaching- and Learning Materials
  - Computer skills Lab- fully equipped
  - Trainer's Guide
    - Reference manuals and books
    - Learners Guide
    - Handout
    - Books
    - Text books
    - ICT policy for Kenya
    - HIS strategic plan
    - WHO Computer application guidelines
    - Vision 2030
    - NHSS framework
  - **Reference Manual and Reference Books**
    - Computer Studies and Information Technology, by Chris Leabbette and steward Wainhute
    - Information Technology(Foundation Level) by P.K. Macbridge, Cambridge University
    - Computer Science, 5th edition, by C.S. French

Module Assessment

1. For theory papers, the questions will be MCQs, matching, True or false and easy administered in the mid semester, end of semester and final qualifying examinations.
2. Practical examinations will be based on OSPE type both National, provincial and District

- **Assessment Conditions**

  As per KMTC examination policy

- **MODULE TITLE : HEALTH INFORMATION SYSTEM**

Time: 100 **Hours (Theory) 48 Hours (Practical)** **10 CREDITS**

Competences

To enable the learner to acquire the necessary skills, concepts, use National standard reporting tools, health data handling, analysis, processing emerging Health Information system (HIS) software methodology and methods for evidence based decision making in HIS

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO HEALTH INFORMATION SYSTEMS	12
UNIT 2	ORGANIZATION OF HEALTH INFORMATION SYSTEM IN KENYA	24
UNIT 3	VARIOUS HEALTH DATA SOURCES	14
UNIT 4	HEALTH SECTOR INDICATORS	24
UNIT 5	THE USE OF ICT IN HIS	26
UNIT 6	PRACTICAL	48

UNIT I Introduction to Health Information System

1. Definition of health information
2. Concepts of HIS
3. Historical background of HIS
4. Goals and objectives of HIS
5. Standard format of health information
6. HIS Policy
7. HIS policy declarations ie health for all by the year 2000 (W.H.O), Vision 2030

UNIT II: Organization of Health Information System in Kenya

1. Tiers of care
    a. Tier One- Community Level
    b. Tier Two- Dispensary and Health Centres
    c. Tier three- District and Sub district hospitals
    d. Tier Four-National referral

UNIT III: Various Health Data sources

1. National tool used in collection of information
2. Type of tools e.g.
    a. Primary
        i. Registers
        ii. Forms
    b. Secondary
        i. Weekly notification of infectious diseases
        ii. Monthly Notification of Infectious disease
        iii. Outpatient Morbidity Report
        iv. inpatient morbidity mortality report forms
        v. District out-patient morbidity summary forms
        vi. Integrated RH, HIV, Malaria, TB and Nutrition
        vii. Vaccine and Immunization
        viii. Service workload
        ix. Nutrition Monthly Reporting
        x. HIV reporting tools
        xi. Community Based Health information system (CBHIS)
        xii. DHIS
        xiii. GIS
3. Procedures of completing H.I.S report tools

UNIT IV Health Sector Indicators:

1. **Sources**
    A. Surveys
        a. Types of surveys
        b. Planning of a survey
        c. conducting survey
        d. Evaluation Survey
        e. Use of survey findings for both on-going and final evaluation.

    B. Statutory reporting tools:
        a. Birth **registration** and notification
        b. Death **registration** and notification
        c. Statutory agencies (Central Bureau of Statistics Attorney General Chambers)
2. **Health sector indicators**
    A. Domains
        a. Input
        b. Process
        c. Output
        d. Impact
    B. Calculation of various health indicators, Immunization rates , coverage rate, Maternal child health, Maternal death rate, Child survival rate, Antenatal and post natal coverage rate, Response Rate, Family

planning Acceptance rate, Continuation rate ,Dropout rate coverage rate, Morbidity rates, Prevalence and incidence rates

UNIT V: The use of ICT in HIS

1. Data Handling
2. ICT application
    a. The role of computers in health information systems -Review relevant HIS software
    b. Computer application
        i) Preparation of data entry sheets
        ii) Procedure of computer data in-put and out-put
        iii) Various in-put media
        iv) Computer operation (Micro and Mini computer)
        v) Validation of data
        vi) Data processing e.g. analysis
        vii) Data interpretation
        viii) Information output from computer.
        ix) Information dissemination levels and users
            a. Administrative
            b. Routine

LEARNING STRATEGIES/METHODS

- Student centered
- Group
- Theory and Practical training integrated
- Consideration of both individual and group based practices/exercises
- Holistic project
- Lecture
- Group discussion
- Visiting health facilities
- Application exercise in a classroom
- Practical exercise
- Assignments
- Independent study of specified topics

RESOURCE CONDITIONS

Training-, Teaching- and Learning Materials

- **Trainer's Guide**
    - Reference manuals and books
- **Learners Guide**
    - Handout
    - Books
    - Text books

Module Assessment

For theory papers, the questions will be MCQs, matching, True or false and easy administered in the mid semester, end of semester and final qualifying examinations.

1. Practical examinations will be based on OSPE type both National, provincial and District

References

- Abstracts of World Health Organisation on Health Information Systems.
- Manual on Health Information System
- Journals and periodicals
- Mervat Abdelhak, et.al, Health Information: Management of a Strategic Resource, 2nd edition, 2001, USA
- Merida L. Johns, Health Information Management Technology, An Applied Approach, 2nd edition, AHIMA, 2007, Chicago, Illinois
- Michelle A. Green, et. al, Essentials of Health Information Management, Principles and Practices, 2005, USA
- WHO, Design and Implementation of Health Information Systems, 2000, Geneva

- **MODULE TITLE : MANAGEMENT**

Time: 120 **Hours** **12 CREDIT S**

Module competence:

This module is designed to enable the learners to acquire the necessary skills, knowledge and attitude to perform leadership & management functions relevant to the course.

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO LEADERSHIP AND MANAGEMENT	38
UNIT 2	ORGANIZATION OF HEALTH SERVICES IN KENYA	08
UNIT 3	HUMAN RESOURCE MANAGEMENT	24
UNIT 4	FINANCIAL RESOURCE MANAGEMENT	10
UNIT 5	PROCUREMENT OF RESOURCES	08
UNIT 6	OFFICE MANAGEMENT	12
UNIT 7	INTRODUCTION TO ENTREPRENEURSHIP	06
UNIT 8	PUBLIC RELATIONS AND CUSTOMER CARE	14

Module Outcome

1. Acquire leadership and management skills
2. Describe the health organizational structure
3. Demonstrate ability to manage human resources
4. Acquire financial management skills
5. Describe procurement processes
6. Demonstrate office management skills
7. Acquire knowledge on Entrepreneurship
8. Acquire knowledge and skills in public relations and customer care

Module Content

Unit 1: Introduction in leadership & management: Definition, Theories, Functions; Definition of leadership, Leadership styles, Qualities of a good leader Definition, Steps, Common problem in a health records department

Unit 2: Organization of health services: MOH structure/ functions, Health care delivery/system, other health disciplines

Unit 3: Human Resource Management: Definition of Human Resource Management, Human Resource functions, definition of selection, recruitment, Recruitment procedure, Induction procedure and retention, Employment ,Staff development ,Welfare and safety, Salaries And wages, Industrial relations, Discipline, Appraisal, Relationship between Health Information Department and other departments, and other health workers, Government Code of Regulations (relevant section)

Unit 4: Financial resource management: Introduction to fundamental financial management, sources of health care financing, financial accounting systems, accounting documents, budget types

Unit 5: Procurement of Resources: Budgeting, Steps in budgeting, Steps in procuring resources, costing of equipment /supplies in Health Records Department

Unit 6: Office management: Definition of an office, Associated terms, Functions of an office, Location of an office, Essential requirements, Duties performed in an office

Unit 7: Introduction to Entrepreneurship: definitions, business plans

Unit 8: Public Relations and customer care: Definition, Principles of public relations, client satisfaction, the role of a Health Information Technician in promoting public relation at the place of work

Teaching methods

- Lectures
- Discussions
- Illustrations/demonstrations
- Case studies
- Role play
- Group work
- Self centered learning

Assessments methods

- CATS, quizzes, written
- Evaluation – end of semester exam

References

1. Armstrong, M (2001): A hand book of Human resource Management Practice. Kegan
2. Beerel, Annabel. *Leadership through Strategic Planning*. London: International Thomson Business Press, 1998.
3. Diane Huber, 2000, *Leadership and Nursing Care Management*
4. Guerrieri, D.J. et al (1988): Houghton Mifflin Accounting: Concepts/ Procedures/Applications. Houghton Mifflin Co. Boston, U.S.A.
5. Health Sector Reform Secretariat documents (on Health Sector Reform website)
6. Hickman C. et al (1996): The Fourth Dimension: The next Level of Personal and Organizational Achievement. John Wiley & Sons- New York, U.S.A.
7. Koontz, Horold (1988): Management. Mc Graw Hill Book Co. ;New York
8. Kreitner. R (1980) Management: A problem solving process; Houghton Mifflin co.
9. Kreitner. R and Kinicki. A (2001): Organizational behaviour 5th Ed. Hill, Boston, Massachusetts
10. Lauren R. et al (1981): Time management for Executives. Rupa &Co. New Delhi, India.
11. Litwin, George H., and Robert A. Stringer, Jr. *Motivation and Organizational Climate*. Cambridge: Havard University Press, 1968.
12. Management Sciences for Health. "*Business Planning to Transform Your Organization.*" The Manager vol. 12, no. 3, 2003.
13. Management Sciences for Health. Financial Management Tools available on the MSH Health Manager's Toolkit. Available at: http://erc.msh.org/toolkit
14. Management Sciences for Health. Managers Who Lead: *A Handbook for Improving Health Services- Available on the LeaderNet website*: http://erc.msh.org/leadernet in the Leadership Facilitator section.
15. McCauley, Cynthia D., Russ S. Moxley, and Ellen Van Velsor, eds. *The Centre for Creative Leadership Handbook of leadership development.* Greensboro, NC: Centre for Creative Leadership; San Francisco: Jossey-Bass, 1998.
16. Ministry of Medical service (MOMS) strategic plan 2008 - 2012
17. Ministry of Public Health and sanitation (MOPHS) strategic plan 2008 - 2012
18. MOH (2005): Reversing the Trends- The Second National Sector Strategic Plan of Kenya, 2005-2010, Health Sector Reform Secretariat.
19. Mburu, H.K. (2007): Basic Accounting .Paulines Publications Africa, Nairobi Kenya.

- **MODULE TITLE : COMMUNICATION SKILLS**

Time: 30 **Hours** **03 CREDIT S**

Module competence:

This module is intended to equip learners with necessary knowledge, skills and attitudes that will enable them to communicate effectively in the profession and other health related fields.

UNITS		**HOURS**
UNIT 1	INTRODUCTION OF COMMUNICATION	02
UNIT 2	TWO - WAY COMMUNICATION	04
UNIT 3	MODES OF COMMUNICATION	04
UNIT 4	VERBAL AND NON – VERBAL COMMUNICATION	04
UNIT 5	LISTENING SKILLS	04
UNIT 6	PATTERNS OF COMMUNICATION	04
UNIT 7	COMMUNICATION AND COMMUNITY DYNAMICS	08

Module Outcomes

At the end of this module, the learner should be able to:

1. Explain the concepts of communication
2. Apply acquired communication skills in their profession and other related fields

Module Content

Unit 1: Introduction of Communication: Definition, purpose, history, theories and models, Shannon's Model, derivative Model; Elements of communication, Stages of communication, Communication process.

Unit 2: Two - way communication: Definition of terms, two – way communication, advantages and disadvantages, of one – way, two –way communication; effective communication; Characteristics of effective communication; advantages of effective communication; Barriers to effective communication; Physical/ environmental barriers, Psychological/attitudinal barriers, Physiological barriers, cultural barriers, System design / organizational, overcoming communication barriers.

Unit 3: Modes of communication:
Definition, mode of communication, intrapersonal communication, interpersonal communication, mass communication; types of interpersonal communication, face to face, telephone, letter writing, mass communication, print media, electronic media, popular media

Unit 4: Verbal and Non – Verbal Communication:
Definition, Characteristic of verbal and non – verbal communication, Types of verbal communication, elements of non –verbal communication, Importance of non – verbal communication.

Unit 5: Listening Skills: definition of terms, steps of listening, levels of listening, barriers to effective listening: cultural barriers, physical barriers, psychological/mental barriers; ways of improving listening skills

Unit 6: Patterns of communication: Definition of terms, major communication patterns, directions of communication, strategies of improving communication
Unit 7: Communication and community dynamics: definition of the key terms, guiding community principles, community leaders, community groups, leadership within the community, adult education; definition of adult learner, characteristics of adult learner, guiding principles in adult learning

Teaching methods

- Lectures
- Discussions
- Illustrations/demonstrations
- Case studies
- Role play
- Group work

Assessments

- CATS, quizzes, written
- Evaluation – end of semester exam

References

1. Management Sciences for Health. Managers Who Lead: *A Handbook for Improving Health Services- Available on the LeaderNet website*: http://erc.msh.org/leadernet in the Leadership Facilitator section.
2. McCauley, Cynthia D., Russ S. Moxley, and Ellen Van Velsor, eds. *The Centre for Creative Leadership Handbook of leadership development.* Greensboro, NC: Centre for Creative Leadership; San Francisco: Jossey-Bass, 1998.
3. Ministry of Medical service (MOMS) strategic plan 2008 - 2012
4. Ministry of Public Health and sanitation (MOPHS) strategic plan 2008 - 2012
5. MOH (2005): Reversing the Trends- The Second National Sector Strategic Plan of Kenya, 2005-2010, Health Sector Reform Secretariat.

- **MODULE TITLE : COMMUNITY HEALTH**

Time: 70 **Hours** **07 CREDIT S**

Module Competencies

The module is designed to enable the learner acquire knowledge and skills on socio demographic characteristics which is the basis of community health to be able to provide information geared towards interventions that will improve the health of the community.

UNITS		**HOURS**
UNIT 1	CONCEPTS IN COMMUNITY HEALTH	04
UNIT 2	HEALTH AND DISEASE	06
UNIT 3	PRIMARY HEALTH CARE	06
UNIT 4	COMMUNITY STRATEGY	04
UNIT 5	MATERNAL AND CHILD HEALTH	04
UNIT 6	NUTRITION AND HEALTH	04
UNIT 7	THE ENVIRONMENT AND HEALTH	04
UNIT 8	COMMUNICABLE DISEASES	08
UNIT 9	NON COMMUNICABLE DISEASES	06
UNIT 10	HIV/AIDS AND STI'S	06
UNIT 11	PLANNING AND EVALUATING COMMUNITY HEALTH SERVICES	08
UNIT 12	PRACTICAL SESSION (VISIT COMMUNITY UNIT)	10

Module Outcomes

1. Apply knowledge and skills in designing and implementing community health interventions
2. Apply knowledge and skills in monitoring and evaluation of community health interventions

Module Content

Concepts in Community Health: Introduction, Understanding people and their environment, Behaviour, environment and health, Individuals, family, and the community, The health Centre and the community, Health and customs, Health awareness, Organization of health services in the community, Community health techniques.

Health and Disease: Definition of health, Definition of sickness, Causes of disease, Spread of disease, Frequency and distribution of disease, Incidence and Prevalence of disease, Morbidity and Mortality, The pattern of disease.

Primary Health Care: Description of PHC, Elements of PHC, Principles and strategies of PHC, The PHC programme, Levels of Health Care Service

Community Strategy: Introduction to Community Strategy, Strategic objectives, Roles of Household and communities, Entry point to community.

Maternal and Child Health: Introduction: MCH Services, The MCH clinic, Immunization, Health education, Community based MCH care.

Nutrition and Health: Introduction, Basic nutrition, Community nutrition, Nutrition in pregnancy and lactation, Malnutrition, Nutrition and other related conditions

The Environment and Health: Introduction, Water, Waste disposals, Food hygiene, Control of vectors, Pollution, Environment and human behaviour, Community environmental survey.

Communicable Diseases: Introduction to communicable diseases, Agent, host and environment, The transmission cycle, Principles for managing communicable disease, Investigation and control of epidemics, Control and eradication methods, Community participation in disease control programmes

Non Communicable Diseases: Introduction to non communicable diseases, Risk Factors, Prevention Strategies, Basic treatment

HIV/AIDS and STI: Causes, Spread, Management, Prevention

Planning and Evaluating Community Health Services: Introduction, Objectives, Community health cycle, Choosing priorities, Setting goals, Organization, Selecting measures of success, Measuring outcomes, Evaluation of programmes.

Practical Session (Community diagnosis): Visit a community unit, Observe the organization of services at the community unit, Data collection tools, Linkage between community unit and facility, Community Diagnosis.

Learning Methods

- Lectures
- Group Discussions
- Practical (Community diagnosis)
- Assignments

Evaluation Methods

- CATs
- Take Away assignments
- End Semester Exam

Reference Manual and Reference Books

McCusker, *Epidemiology in Community Health*,
Manual of Community Health by AMREF

- **MODULE TITLE : HUMAN PSYCHOLOGY**

Time: 30 **Hours** **03 CREDIT S**

Module Competencies:
This module is meant to equip the learners with knowledge, skills and attitude to effectively cope with and provide psychosocial support to clients, patients and staff

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO PSYCHOLOGY	02
UNIT 2	PERSONALITY	04
UNIT 3	ANXIETY AND CONFLICT	04
UNIT 4	PERCEPTION	02
UNIT 5	SOCIALIZATION	04
UNIT 6	MOTIVATION	04
UNIT 7	STRESS MANAGEMENT	04
UNIT 8	Counselling	06

Module Outcomes:
1. Apply the knowledge and skills to cope with and counsel patients, clients and staff.
2. Apply the knowledge and skills in promoting effective public relations

Module Content
Introduction to Psychology: Description, history, branches
Personality: Types, determinants and factors
Anxiety and Conflict: Definitions, Types, Causes and Resolution,
Perception: Effects on human behaviour
Socialization: Introduction to socialization Process and factors
Motivation: Definition and factors influencing motivation
Burn out and Stress Management: Definition, Causes, Signs and symptoms, Management,
Counseling: definition, self-awareness introduction to theories, counseling skills, counseling process

Learning Methods
- Lectures
- Group Discussions
- Assignments

Evaluation Methods
- CATs

- Take Away assignments
- End Semester Exam

References:

Essentials of understanding psychology by Robert Feldman (1997) Third edition

COURSE DESIGN AND ORGANISATION FOR THEORITICAL INSTRUCTION: MODULES UNITS				
MODULE NO	**MODULE NAME**	**HRS**	**MODULE UNITS**	**HRS**
SEMESTER 1 YEAR 1				

KMTC HRI DIPLOMA CURRICULUM

1. MODULE TITLE : ANATOMY AND PHYSIOLOGY

Time: 144 **Hours** **14 CREDIT S**

Course organization for Theoretical Instruction
Course organization four Semesters Theory (Year 3)

Module Competence

This module is designed to equip a Health Records and Information learner with knowledge, skills and attitude in Anatomy and Physiology necessary for effective classification of diseases, conditions and medical procedures according to International Classification of Diseases and International Classification of Procedures in Medicine and effective communication and participation in research activities in health

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO ANATOMY AND PHYSIOLOGY	04
UNIT 2	HUMAN SKELETON AND JOINTS	14
UNIT 3	MUSCULAR SYSTEM	14
UNIT 4	CIRCULATORY SYSTEM	16
UNIT 5	RESPIRATORY SYSTEM	14
UNIT 6	DIGESTIVE SYSTEM	16
UNIT 7	URINARY SYSTEM	10
UNIT 8	NERVOUS SYSTEM	14
UNIT 9	REPRODUCTIVE SYSTEM	14
UNIT 10	ENDOCRINE SYSTEM	12
UNIT 11	SENSORY ORGANS (SKIN, NOSE, TONGUE, EAR AND EYE)	16

Module Outcomes

At the end of the module the learner will be able to:

1. Define and state the common terms used in anatomy and physiology
2. Describe the embryology processes
3. Explain the major structures of the human body organs and systems
4. Describe the human body cavities
5. Define the term skeleton, explain the types of human skeleton and bones forming the human skeleton
6. Discuss the anatomy and physiology of the human skeleton and various classifications of joints

7. Describe the various types of human body structures, organs and systems
8. Discuss the anatomy and physiology of human body systems (muscular, circulatory, respiratory, digestive, urinary, nervous, reproductive and endocrine)
9. Describe the anatomy and physiology of the sensory organs (skin, nose, tongue, ear and eye)
10. Use diagrammatic illustrations and discuss the various human body organs and systems
11. Demonstrate ability to locate the various organs in the living body, cadaver or in models

Module Content

This module entails introduction to Anatomy and Physiology, description of human skeleton and Joints, Muscular, Circulatory, respiratory, digestive, urinary, nervous, reproductive, endocrine systems and sensory organs

Introduction to Anatomy and Physiology:

Definition of the terms anatomy and physiology, statement of the common terms used in anatomy and physiology, description of the embryology processes, definition of the term organ, naming of all body organs, description of the anatomy of the organs of the human body, describe the human body cavities

Human Skeleton and Joints:

Definition of the term skeleton, listing types of skeletons, listing all the bones forming the human skeleton, description of the structure, functions of the human skeleton, definition of the term joint, description of the various classifications of joints, description of the structures and functions of the joints

Muscular System:

Definition of the muscular system, listing types of muscles, description of the structure and function of types of muscles

Circulatory System:

Definition of the circulatory system (blood and lymph), naming major structures of the circulatory system, explanation of the systemic, pulmonary, portal blood and lymph circulation

Respiratory System:

Definition of the respiratory system, listing of major structures of the respiratory system, description of the structure and function of the respiratory system

Digestive system:

Definition of the digestive system, listing of major organs of digestive system, description of the structures and functions of digestive system and accessory organs of digestion

Urinary System:

Definition of the Urinary system, naming of major structures of the urinary system, description of the structure and functions of the urinary system

Nervous System:
Definition the nervous system, description of the structure and function of the nervous system

Reproductive system:
Definition of the reproductive system, listing of major structures of the male and female reproductive systems, description of the structures and functions of the male and female reproductive systems

Endocrine System:
Listing of major structures of the endocrine system, description of the function of the endocrine system

Sensory organs
Description of the structures and functions of the skin, nose, tongue, ear and eye

2. MODULE TITLE : PATHOLOGY

Time: 96 **Hours** **10 CREDIT S**

Course organization for Theoretical Instruction
Course organization four Semesters Theory (Year 2)

Module Competence
This module is designed to equip a Health Records and Information learner with knowledge, skills and attitude in pathology necessary for effective classification of diseases, conditions and medical procedures according to International Classification of Diseases and International Classification of Procedures in Medicine and effective communication and participation in research activities in health.

UNITS		HOURS
UNIT 1	GENERAL CONCEPTS OF DISEASE AND PRINCIPLES OF DIAGNOSIS	02
UNIT 2	INFLAMMATORY PROCESS AND ITS ROLE IN DISEASE AND INJURY	06
UNIT 3	BODY IMMUNITY	12
UNIT 4	ROLE OF PATHOGENIC MICRO ORGANISMS AND PARASITES IN DISEASE	12
UNIT 5	COMMUNICABLE DISEASE TRANSMISSION AND CONTROL	12
UNIT 6	COMMUNICABLE DISEASE TRANSMISSION AND CONTROL	10
UNIT 7	NEOPLASMS	08
UNIT 8	ABNORMALITIES OF BLOOD COAGULATION & CIRCULATORY DISORDERS	12
UNIT 9	MAJOR DISEASE CONDITIONS RELATED TO SPECIFIC BODY SYSTEM & BASIC DIAGNOSTIC TESTS	12
UNIT 10	TREATMENTS COMMONLY USED	12

Module Outcomes
At the end of the module the learner will be able to:

- Discuss general concepts of disease and principles of diagnosis
- Describe the inflammatory process and its role in disease and injury
- Describe cell mediated and humeral immunity.
- Describe the role of pathogenic micro organisms and parasites in disease
- Describe communicable disease transmission and control
- Describe congenital and hereditary disease causes and manifestations
- Describe types and characteristics of neoplasm and modalities of treatment
- Describe the abnormalities of blood coagulation and circulatory disorders
- Describe major disease conditions related to specific body system and basic diagnostic tests
- Describe treatments commonly used

Module Content

This module entails explanation of general concepts of disease and principles of diagnosis, inflammatory process and its role in disease and injury, body immunity, role of pathogenic micro organisms and parasites in disease, description of communicable disease transmission and control, congenital and hereditary disease, neoplasm, abnormalities of blood coagulation & circulatory disorders, major disease conditions related to specific body systems and identification of basic diagnostic tests.

General concepts of disease and principles of diagnosis:
Characteristics of disease process, basic principles of diagnosis, use of diagnostic tests and procedures

Inflammatory process and its role in disease and injury:
Characteristics and clinical manifestation of an acute infection, outcomes of an inflammatory reaction and comparison between infection and inflammation

Body Immunity:
Role of lymphocytes in the immune response, compare immunity and hypersensitivity, classes of antibodies and allergic manifestations and methods of treatment

Role of pathogenic micro organisms and parasites in disease:
Major groups of pathogenic bacteria, mechanism by which antibodies inhibit the growth of bacteria, mode of action of virus infection and the body's response, spectrum of infections caused by fungi and common parasitic infestations and how they are acquired

Communicable disease transmission and control:
Communicable disease transmission and control, common sexually transmitted diseases, their clinical manifestation, complication and methods of treatment

Congenital and hereditary disease:
Common causes of congenital malformation, abnormalities of sex chromosomes and their clinical manifestation, common genetic abnormalities

Neoplasm:
Characteristics of benign and malignant tumors**,** principle modalities of cancer treatment

Abnormalities of blood coagulation & circulatory disorders:
Common causes of disturbance in haemostasis, causes and effect of arterial and venous thrombosis and factors disturbing the regulation of circulation

Major disease conditions related to specific body system and identify basic diagnostic tests:
Cardiovascular and circulatory system, respiratory system, male and female reproductive system, including those occurring during pregnancy, urinary system, gastrointestinal system, endocrine system, nervous system, musculoskeletal system

Treatments commonly used:
Pharmacology, revision of all the diseases affecting the various human body systems

3. MODULE TITLE : FIRST AID

Time: 48 **Hours** **05 CREDIT S**

Course organization for Theoretical Instruction
Course organization four Semesters Theory (Year 2)

Module Competence

This module is designed to enable a Health Records and Information learner to apply First Aid knowledge and skills in assessment of emergency situations and management of casualties in emergency situations.

UNITS		**HOURS**
UNIT 1	CONCEPTS OF FIRST AID AND CERTIFICATION	02
UNIT 2	ATTRIBUTES/QUALITIES OF A FIRST AIDER	02
UNIT 3	OVERVIEW OF HUMAN BODY SYSTEMS	04
UNIT 4	RESPIRATION	02
UNIT 5	CIRCULATION	02
UNIT 6	RESUSCITATION	08
UNIT 7	FRACTURES AND SPRAINS	04
UNIT 8	CASUALTY INCIDENT MANAGEMENT	06
UNIT 9	BURNS, SCALDS AND POISONING	02
UNIT 10	DRESSINGS, BANDAGES AND APPLICATION IN EMERGENCY SITUATIONS	08
UNIT 11	LIFTING AND CARRYING CASUALTIES	06

Module Outcomes

At the end of the module the learner will be able to:

- Describe and apply the principles and practice of First Aid including its certification
- Explain the structures and functions of the human body
- Describe the mechanism of respiration, conditions of respiratory system, their causes, and management
- Describe the mechanism of circulation, organs forming circulatory system conditions of circulatory system, causes, and management
- Explain and apply methods of resuscitation

- Apply skills in controlling internal and external bleeding, recognize swelling and guarding against shock
- Identify different types of fractures, injuries to muscles, ligaments and manage the injuries properly
- Describe various injuries to the nervous system and treat them
- Manage various types of burns, scalds and poisoning
- Demonstrate different methods of lifting and carrying casualties
- Explain procedures followed in aiding an emergency delivery
- Demonstrate the ability to utilize bandages, dressings and splints in emergency situations

Module Content
The application of First Aid knowledge and skills in assessment, diagnosis and management of casualties in emergency situations

Concepts of First Aid:
Definition of First Aid, principles of first Aid, scope, practice, aim, determining diagnosis through DRABC, AMEGA and procedure of examination

Attributes/ Qualities of a First Aider:
Characteristics of a good first aider, attitudes of a good first aider and application

Overview Human Body systems:
Statement of the human body systems and organs therein (***Also refer to Anatomy and Physiology Objectives***)

Respiration:
Description of mechanism of respiration, conditions of respiratory system, their causes, and management

Circulation:
Description of mechanism of circulation, conditions of circulatory system, causes, and management
Organs forming circulatory system
Recognition of: Pulse rate, Temperature level, Bleeding and Breathing rates
Application of skills in controlling internal and external bleeding, swelling and guarding against shock

Resuscitation:
Definition of resuscitation
Types of resuscitation in adults and children: Manual and electrical
Various methods of respiration in adults: Mouth to mouth, Mouth to Nose, Mouth to Mouth and Nose, and Mouth to Stoma
Various methods of respiration in children: Mouth to Mouth, Mouth to Mouth and Nose, and Mouth to Stoma

Fractures and Sprain:
Definition of fractures, dislocation, sprains and strains, sign and symptoms of fractures, types of fractures (open and closed fractures), management of sprained or torn muscles and ligaments and fractures

Casualty Incident Management
Definition and management of incidences
Practical session: recovery position-types, systematic steps, mode of seeking help, messages to ambulance crew and computation of casualty handing over message

Burns, Scalds and Poisoning:
State the signs and symptoms of burns, scalds and poisoning
Management of various types of burns, scalds and poisoning

Dressings, Bandages and application in emergency situations:
Definition of a dressing and bandage, description of a triangular and roller bandages, application of a dressing, functions of a dressing, application of a roller and triangular bandages

Lifting and carrying casualties
Application of lifting and carrying casualty methods and procedures:
Methods involving one first aider: human crutch, drag method, fireman's lift, pick – back
Methods involving multiple first aiders: four handed seat, chair lift, stretcher-dressing and loading casualties into ambulance

Methodology (Instructional Strategies)

- Lecture
- Group discussion
- Application exercises and practices in a classroom
- Assignments
- Independent study
- Learner-centered
- Off- and on-job-training integrated
- Paying visits and attachments to health facilities

Assessment And Evaluation Methods

- ***Theory paper examination:***
  - ✓ Multiple Choice Questions (MCQs)
  - ✓ Matching variable statements
  - ✓ True or False answer questions
  - ✓ Essay administered questions
- ***Practical examination***:
  - ✓ Objective Structured Practical Examination (OSPE)
  - ✓ Demonstration

REFERENCES

Anatomy and Physiology
Ross and Wilson, Anatomy and Physiology in health and illness, 11th Edition

Pathology
Merck manual
Medical dictionary
Muir's text book of Pathology

First Aid
St. John's Ambulance, Essentials of First Aid, 10th Edition
St. John's Ambulance, First Aid at work

4. MODULE TITLE : MEDICAL DATA CLASSIFICATION

Time: 60 **Hours** **06 CREDIT S**

Module Competence

At the end of the module the learner will be able to:

1. Define disease classification and International classification of procedures in Medicine (ICPM).
2. Outline the historical development of international classification of Diseases and International classification of Medical procedures.
3. Explain types of classification of diseases, operations and procedures
4. Explain the purpose of disease classification.
5. List and describe the 21 major categories (Special groups of conditions and body systems).
6. Describe the arrangement of ICD and ICPM
7. Describe the procedure of coding, indexing
8. State abbreviations, conventions, punctuation as used in the ICD.
9. Define and describe diagnostic index, the uses, methods of storage and retrieval.
10. Demonstrate ability to code and index diseases and medical procedures according to ICD and ICPM.
11. Demonstrate ability to create (manual and electronic index); use the diagnostic index.
12. Describe the various medical terms used in coding and classifying diseases.
13. Differentiate between primary and secondary diagnosis (Dual Classification).
14. Display tidiness, legibility, and accuracy in completing the index.
15. Demonstrate the ability to generate, analyse and interpret information
16. Demonstrate ability to edit and audit a case record.
17. State the procedures in data security and confidentiality

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO ICD AND ICPM	04
UNIT 2	STRUCTURE OF THE CLASSIFICATION	04
UNIT 3	PURPOSE OF CLASSIFICATION, CODING, AND INDEXING	04
UNIT 4	TWENTY-ONE MAJOR CATEGORIES OF ICD	10
UNIT 5	ORGANIZATION OF ICD AND ICPM	04
UNIT 6	PROCEDURES OF CODING AND INDEXING	04
UNIT 7	ABBREVIATION, PUNCTUATION AND OTHER CONVENTION	04
UNIT 8	DIAGNOSTIC INDEXING	04

UNIT 9	CERTIFICATION	06
UNIT 10	RULES AND GUIDELINES FOR MORBIDITY AND MORTALITY	06
UNIT 11	QUALITY IN DISEASE CLASSIFICATION REPORTS	06
UNIT 12	SECURITY, CONFIDENTIALITY & ETHICS (DATA PROTECTION)	04
UNIT 13	STATISTICAL PRESENTATION	06

UNIT 1: Introduction to ICD and ICPM - Definition of ICD and ICPM, Importance of the two systems, Historical development of ICD and ICPM, Prominent earlier classifications, Current ICD and ICPM

UNIT 2: Structure of the classification - General arrangement of ICD and ICPM operations and their application, Principles of coding diseases, Principle of coding procedures in medicine (operations), Principles of coding other health information records.

UNIT 3: Purpose of classification coding and indexing –Standardization, Management, planning, research and teaching, Statistical analysis, Systematic arrangement of health information.

UNIT 4: Twenty One categories of ICD – Introduction to 21 Chapters and the categories

Tabular list of inclusions and four-character subcategories

I	Certain infectious and parasitic diseases
II	Neoplasms
III	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
IV	Endocrine, nutritional and metabolic diseases
V	Mental and behavioural disorders
VI	Diseases of the nervous system
VII	Diseases of the eye and adnexa
VIII	Diseases of the ear and mastoid process
IX	Diseases of the circulatory system
X	Diseases of the respiratory system
XI	Diseases of the digestive system
XII	Diseases of the skin and subcutaneous tissue
XIII	Diseases of the musculoskeletal system and connective tissue
XIV	Diseases of the genitourinary system
XV	Pregnancy, childbirth and the puerperium
XVI	Certain conditions originating in the perinatal period
XVII	Congenital malformations, deformations and chromosomal abnormalities
XVIII	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified
XIX	Injury, poisoning and certain other consequences of external causes

XX External causes of morbidity and mortality
XXI Factors influencing health status and contact with health services

UNIT 5: Organization of ICD and ICPM - Organization of Vol.1 and Vol. 11 of ICD books, Organization of both Vol.1 and Vol. 11 of ICPM, Tabular list Vol. 1, Diseases, nature of injury, Supplementary classification, Comparison of the two editions, External cause of injury, Alphabetical index Vol. 11, Diseases, injuries and supplemental classification, Adverse effects of drugs and other chemical substances, Comparison of the two editions, Arrangement of ICPM Vol.1 and Vol. 11, Alphabetical index, . Numerical index of procedures in medicine.

UNIT 6: Procedures of coding and indexing - Primary arrangements (Indices and Modifier), Eponyms (Main entries, Modifiers, Adjectives, Comparison of previous editions and present editions). Tabular list, Category codes, Use of category codes, Use of more than one code, Combined category code, Use of inclusions and exclusions, Provisional diagnosis, Dual classification, Coding of neoplasms (Classification, Grouping, Specific coding instruction, Special consideration, Un-determined primary site, Metastic site, Suspected neoplasm rule out, Use of M codes, Mental disorders, combined category codes, Mental conditions and physical condition, Intended primarily for psychiatric conditions, Use of two codes to express mental and physical condition, Mental retardations, Forth digit , subdivisions), Obstetric coding (Pregnancy, Normal, Completion of pregnancy, Combine category code for certain conditions complicating pregnancy, Associated conditions- Abortion, Deliveries, Normal complicated, Premature, multiple and still birth Obstetrical procedures, Tabular list of operation, Spontaneous deliveries, Post-partum condition- Definition, Complication, Supplementary classification codes.

UNIT 7: Uniform abbreviation, punctuation and other convention.- Abbreviations – NOS, NEC, V Code, M – Code, E – Code), Functions (Asterisk, Colon, Parenthesis, Brackets, Daggers), Inclusion and Exclusion

UNIT 8: Diagnostic indexing: Definition of indexing, Types of records to be indexed,- Basic identification particulars required for indexing health record, Procedure of indexing, Review preparation of computer in-put (e-Coding), procedures of filing index cards, numerical filing of cards, professional ethics and legal requirements of health records practice and the official secrets act, Notification of vital events (Birth and Deaths).

UNIT 9: Certification: clinical judgment in completing the medical certificate of cause of death, limit the range of diagnoses, accuracy and usefulness of the report.

UNIT 10: Rules and guidelines for morbidity and Mortality: causes of death recorded, selecting the underlying cause, determine the originating antecedent cause of death, General Principle of selecting the guiding rules.

UNIT 11: Quality In Disease Classification Reports:

UNIT 12: Security, Confidentiality & ethics

Definition of data security and confidentiality, Data security, Data confidentiality,

UNIT 13: Statistical presentation: Definition of terms, sources of obtaining mortality data, selection, reporting requirements related to fetal, perinatal, neonatal, infant mortality, presentation and statistical analysis.

Learning Methods

- Lecture,
- Focus group Discussion,
- Brainstorming
- Student centred
- Self-Directed Learning
- Practicum integrated with other modules
- Practices/exercises

Assessment Methods and Schedules

- ✓ For theory papers, the questions will be MCQs, matching, true or false and essay administered in the mid semester, end of semester and final qualifying examinations.
- ✓ Practical examinations will be based on OSPE type in the prescribed Practical Assessment centres including but not limited to National, provincial and District hospitals.

Assessment Conditions

As per KMTC examination policy

REFERENCES

ICD 10
ICPM

5. MODULE TITLE : MEDICAL TERMINOLOGY

Time: 60 **Hours** **06 CREDIT S**

Module Competence

- Explain the scope and nature of terminology used in medicine and allied professions.
- Identify words that describe general anatomical features, including disorders.
- Identify words which describe medical tools, equipment and procedures.
- Identify words that describe pharmacological terms.
- Identify words that describe physiological and anatomical features in the musculoskeletal system, including disorders.
- Identify words that describe physiological and anatomical features in the cardiovascular, lymphatic and immune systems, including disorders.
- Identify words that describe physiological and anatomical features in the respiratory and reproductive systems, including disorders.
- Identify words that describe physiological and anatomical features in the digestive and excretory systems, including disorders.
- Identify words that describe physiological and anatomical features in the skin, including disorders.
- Identify words that describe physiological and anatomical features in the nervous and sensory systems, including disorders.

UNITS		**HOURS**
UNIT 1	Introduction to Medical Terminology	25
UNIT 2	Body Systems	20
UNIT 3	Disease and Treatment	15

Module Outcomes

By the ends of each unit the student will be able to:-

- Explain the scope and nature of terminology used in medicine.
- Identify words that describe general anatomical features, medical tools, equipment and procedures.
- Identify words that describe pharmacological terms
- Identify words that describe physiological and anatomical features in the body parts and systems.

Module Content

Unit 1: Definition of medical terminology, Importance of medical terminology, Origin (Historical) of medical terms, Component part of medical terms, Commonly used prefixes, suffixes, stem, medical abbreviation, signs, symbols, in diseases and procedures in medicine, Component parts of medical, pharmacological terms, Examples of prefixes, suffixes and terms, Case study.

Unit 2: Describe terminology by body system, Terms related to body systems, disease and conditions of each body system, terms related to diagnostic procedures of each body system, Abbreviations used in each body system, Case study.

Unit 3: Describe types of Diseases, Infectious, Responses to Diseases, Word Part Pertaining to Diseases, Diagnosis and Treatment, Surgery, Cancer, Case study.

Learning Methods

- Lecture,
- Focus group Discussion,
- Brainstorming
- Student centred
- Self Directed Learning
- Practicum integrated with other modules
- Practices/exercises

Assessment Methods and Schedules

- ✓ For theory papers, the questions will be MCQs, matching, true or false and essay administered in the mid semester, end of semester and final qualifying examinations.
- ✓ Practical examinations will be based on OSPE type in the prescribed Practical Assessment centres including but not limited to National, provincial and District hospitals.

Assessment Conditions

As per KMTC examination policy

REFERENCES

1) F.A Davis, Taber's Cyclopaedic Medical Dictionary, 14th edition, 1981, Philadelphia
2) Thomas C., Taber's Cyclopaedic Medical Dictionary, 6th edition, 2001, Philadelphia
3) Barbara A. Gylys, et. al, Medical Terminology, A Body System's Approach, 5th edition, 2005, Philadelphia
4) Peggy C. Leonard, Quick and Easy Medical Terminology, 2nd edition, 1995, by W.B Saunders Co.

5) Internet Search Engine for Referent.

6. MODULE TITLE: HEALTH RECORDS MANAGEMENT

Time: 210 **Hours** **21 CREDITS**

MODULE COMPETENCE

This module is designed to equip the learner with knowledge, skills and positive attitude to effectively and efficiently manage Health Records.

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO HEALTH RECORDS MANAGEMENT	08
UNIT 2	ORGANIZATION & MANAGEMENT OF RECEPTION, REGISTRATION & INITIATION OF PATIENT/CLIENT HEALTH RECORD	10
UNIT 3	QUALITIES OF A HEALTH RECORDS AND INFORMATION OFFICER	04
UNIT 4	DIFFERENT TYPES OF HEALTH RECORDS AND THEIR SOURCES	10
UNIT 5	ORGANIZATION & MANAGEMENT OF HEALTH RECORDS INDICES	08
UNIT 6	ORGANIZATION & MANAGEMENT OF PATIENTS/CLIENTS SCHEDULES , FOLLOW-UPS AND CLINIC PREPARATION PROCEDURES	15
UNIT 7	ORGANIZATION & MANAGEMENT OF ADMISSIONS & DISCHARGES OF PATIENTS /CLIENTS	15
UNIT 8	VARIOUS FUNCTIONS OF HEALTH RECORDS DEPARTMENT	10
UNIT 9	ORGANIZATION, MANAGEMENT & MAINTENANCE OF HEALTH RECORDS	10
UNIT 10	LEGAL ASPECTS OF HEALTH RECORDS	15
UNIT 11	ACQUISITION OF HEALTH RECORDS EQUIPMENT	10
UNIT 12	SPECIAL HEALTH RECORDS	10
UNIT 13	MANAGING OTHER RECORDS	10
UNIT 14	ESTABLISHING A HEALTH RECORDS AND INFORMATION DEPARTMENT	15
UNIT 15	DEVELOPING AND DESIGNING HEALTH RECORD FORMS	10
UNIT 16	APPRAISAL, DISPOSAL AND ARCHIVING HEALTH RECORDS	10
UNIT 17	QUALITY ASSUARANCE IN HEALTH RECORDS MANAGMENT	10
UNIT 18	ELECTRONIC HEALTH RECORDS	30

Modules Outcomes

1. Give a historical background of Health Records discipline and its organization
2. Explain the value and uses of Health Records.
3. Display the qualities of a Health Records and Information Officer
4. Identify and Manage different types of Health Records and their sources.
5. Describe and display ability to manage Health Records function and interdepartmental relationships.
6. Organize and manage the reception, registration and initiation of patient/client Health Record.,
7. Organize & Manage Health Records indices,
8. Organize & Manage Patients/clients schedules & follow-ups and clinic preparation procedures
9. Organize and manage the admissions and discharges of patients /clients.
10. Organize & manage the storage, retrieval, control and maintenance of health records.
11. Demonstrate the ability to analyse and interpret and safeguard legal aspects of Health Records and various acts related to them.
12. Acquire & Maintain Health Records equipment.
13. Manage special Health Records.
14. Participate in the organization & Management of other records.
15. Establish a health Records and Information Department in a health care facility.
16. Design Health records forms and manage their Reproduction
17. Ensure Quality control & Assurance in Health Records & Health Care services.
18. Organize and manage medical secretarial services.
19. Select valuable records for permanent preservation and advice on records disposal procedures.
20. Apply records preservation techniques and display ability to identify records needing rehabilitation.
21. Describe and display the ability to manage non-conventional records.
22. Provide user services to researchers and scholars.
23. Compare a health care registry (Library) and general registry
24. Apply Electronic health Records in managing health records procedures

Module Content

Unit 1: Introduction To Health Records Management

Definition of Health Records and Public Records, Historical background of Health Records, Organization of Health Records services, Health records ethics, current and future development (contemporary issues

Unit 2: Organization & Management Of Reception, Registration & Initiation Of Patient/Client Health Record

Definition of reception, registration and initiation of health records, Description of the procedures used in receiving, registering and initiation of patients'/clients' health records.
Qualities of a receptionist, Numbering systems, Organization and management of reception, registration and initiation of a health records.

Unit 3: Health Records And Information Officer

Duties, responsibilities, functions and accountability of a Health Records and Information Officer.

Unit 4: Different Types Of Health Records And Their Sources

Different types of Health Records and their sources e.g. Hospital Records and Community records

Unit 5: Organization & Management Of Health Records Indices

Definition of various Health Records indices, Characteristics of physician index, Importance of each index, Procedures of creating various health records indices
Methods of maintaining health records indices and the equipment used in the storage of indices.
Organization and management of all Health Records indices.

Unit 6: Organization & Management Of Patients/Clients Schedules, Follow-Ups And Clinic Preparation Procedures

Concept of scheduling and follow up, Types of appointment system, Queuing theory in application to patient/clients scheduling, Equipment used in scheduling procedures, Definition of a clinic and clinic preparation, Organization and management of clinic preparation

Unit 7: Organization & Management Of Admissions & Discharges Of Patients /Clients

Organization and management of admission and discharge procedures, Maintenance of bed bureau, Edit and audit of Health Records, Collection, compilation, dissemination & verification of hospital activity reports, Coding/indexing procedures

Unit 8: Various Functions Of Health Records Department

Functions of a Health Records department, (Reception, flow of patients, Documentation, Storage and Retrieval of health records) among others.

Unit 9: Organization, Management & Maintenance Of Health Records

Organization and management of filing and tracing systems, electronic application of health records.

Unit 10: Legal Aspects Of Health Records

Legal aspects of health records; confidentiality, security, ownership, retention and disposal and disclosure.Various acts related to health records, (public health act, records and archives act, radiation protection act, mental health act, government official secret act, civil registration act, workman compensation act, criminal procedures code, records disposal act, public archives and national documentation service act.)

Unit 11: Acquisition Of Health Records Equipment

Documents used in acquiring Health Records equipment, Acquisition procedures, Various equipment used in the storage and retrieval of health records, Storage control and maintenance of Health Records equipment

Unit 12: Special Health Records

Description of special health records, Types of special health records(Accident, and emergency records, Psychiatric records, Infectious, diseases records, Births and deaths records, Laboratory services records, Child Welfare Clinic Records, Maternity records, Radiology Records, Radiotherapy records, PTB Records, Management of special health records and their importance, Security and control procedures of special health records, Procedures of completing special health records

Unit 13: Managing Other Records

Handling of different types of records: Personnel records, Administrative records, Archival records, Office Records, Basic library procedures

Unit 14: Establishing A Health Records And Information Department

Needs assessment, Operational research, Organization of various sections, Acquisition of staff and equipment, Commissioning procedures, Preparations of health records, Development of practice manual.

Unit 15: Developing And Designing Health Record Forms

Basic principles of form design, Various medical forms used in a health records department, Principles and procedures of pre-testing medical forms ,Reproduction ,costing, standardization and Control procedures.

Unit 16: Appraisal, Disposal And Archiving Health Records

Appraisal of records, Qualities of appraiser, Records transfer procedure, Preparation of disposal list, Retirement of records in registries and departmental records room ,Preparation of records disposal schedules, Destruction procedures, Role of national archive(Establishment of private archives, Preservation of records by creator, National documentation services), Conservation techniques, Conservation materials and equipment, Microfilming and different types of microforms ,Concept of audio-visual materials ,Organization and special requirement of storage areas , Access to records in records creating offices, Requisitioning of records from Kenya National archives ,National documentation services

Unit 17: Quality Assurance In Health Records Managment

Concept of quality assurance, Importance of quality assurance, Procedures in ensuring quality assurance, Formation of health records sub-committee, methods and tools of measuring quality and standards in measuring quality.

Unit 18: Electronic Health Records

Define EHR**,** Creation, maintenance, storage and management of EHR, Structure & content of an EHR ,Electronic records formats, Authenticity & reliability of EHR, Legal issues and policies of EHR ,Risks, digital signature, e-mail records and web content management of HER ,File naming ,Selection of digital storage media , Digital archiving, Classification & indexing ,Retrieval, storage & presentation ,Process appraisal, Retention & disposal, Policies, procedures & guidelines. PRIVACY & SECURITY OF EHR (Confidentiality, disclosure, litigation, passwords, disposition & software) EMR functional requirements in Kenya

Teaching Methodology

1. Lectures
2. Group discussions
3. Demonstration
4. Role play

Module Assessment

Assessment Methods and Schedules

- For theory papers, the questions will be MCQs, matching, true or false, filling the blanks, short answer questions and essay administered in the mid semester, end of semester and final qualifying examinations.
- Practical examinations will be based on in National, provincial and District hospitals

Reference materials

1. Huffman, Medical Record Management, 9th edition, 1990, Berwyn, Illinois
2. Mervat Abdelhak, et.al, Health Information: Management of a Strategic Resource, 2nd edition, 2001, USA
3. Merida L. Johns, Health Information Management Technology, An Applied Approach, 2nd edition, AHIMA, 2007, Chicago, Illinois
4. Michelle A. Green, et. al, Essentials of Health Information Management, Principles and Practices, 2005, USA
5. WHO, Design and Implementation of Health Information Systems, 2000, Geneva
6. Huffman, health information management 2002, Berwyn, Illinois
7. Kathleen M. Latour et al health information management 2nd edition 2006 Chicago Illinois,
8. Medical Records Organization and Management GD Mogle, 1st edition 2006

7. MODULE TITLE : HEALTH STATISTICS

Time: 190 **Hours** 96 **Hours (Practical)** **19 CREDIT S**

Competence

This Module is designed to equip the Health Records and Information students with statistical knowledge, skills and attitudes which will enable them collect, compile, compute analyse, interpret and disseminate Health statistics required for planning and management of Health Services

Learning outcomes

1. Describe Health Statistics, its value and sources
2. Explain different methods of data collection
3. Describe tools used in data collection of health statistics
4. Explain health facility administrative statistics, importance and uses
5. Describe procedures for collecting, compiling, computation and analysing health statistics
6. Ability to Interpret, present and disseminate health statistics
7. Apply computer in statistical procedures

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO HEALTH STATISTICS	24
UNIT 2	HEALTH FACILITY ADMINISTRATIVE STATISTICS	48
UNIT 3	DATA PRESENTATION	48
UNIT 4	CALCULATION OF MEASURES OF CENTRAL TENDENCY	48
UNIT 5	CALCULATION AND PRESENTATION OF MEASURES OF DISPERSION	48
UNIT 6	PROBABILITY AND NORMAL DISTRIBUTION	24

Content

Unit I: Introduction to Health statistics **24 Hrs**

Definition of health statistics, uses, importance, data collection methods, indirect, observation and direct observation, Interviewing, questionnaire , Abstraction of data from published statistics, Description of Data collection tools, Principles of questionnaire design, Principles of interview schedule design, Sampling , sample , sample size determination, from a population, Random sampling, Systematic sampling, Stratified sampling, Multi-stage sampling, Cluster sampling, Quota sampling, Survey Process, population ,Conduct a pilot survey, pilot survey, Purpose of conducting a pilot survey, Procedures of conducting a pilot survey, Procedures of

pre-testing questionnaire and interview schedule, Edit data, Procedures of editing, Definition and importance of editing data, Different methods of editing data, Code and classify data, different methods of coding data and classification of the same, purpose and importance of coding and classification, types of data, Ungrouped and Group

Unit II: Health Facility administrative statistics **48 Hrs**

- Description of health facility administrative statistics
- Procedures of collecting health administrative statistics
- Tools for collecting health administrative statistics
- Uses and importance of health administrative statistics
- Description of the standard terms in health administrative statistics.
- Terminology and Computation health facility administrative statistics
    - ⇒ Occupied bed days
    - ⇒ Available bed days
    - ⇒ Vacant bed days
    - ⇒ Excess bed days
    - ⇒ Admission, discharges & deaths
    - ⇒ Well people
    - ⇒ Average occupancy
    - ⇒ Percentage occupancy
    - ⇒ Average length of stay
    - ⇒ Turn over interval
    - ⇒ Turn over per bed
    - ⇒ Crude hospital death rate
    - ⇒ Average discharge rate
    - ⇒ Average admission rate
- Apply standard Health facility Administrative Terms and Formulae accurately:
- Out-patient statistics
    - ⇒ Collect, compute, presentation and analysis
    - ⇒ M.C.H. Evaluation techniques
    - ⇒ Family planning Evaluation techniques
    - ⇒ Health activity analysis
- Interpretation, presentation and dissemination of health administrative statistics

Unit III: Data Presentation **48 Hrs**

- Description of different methods of data presentation.
    - Description of narrative presentation
        - Advantages and disadvantages
    - Tabular Presentations
        - Types of tables
        - Simple tables
        - Multiple column tables
        - Contingency tables
        - Principles of table construction

- Charts Presentation
  - Simple bar charts
  - Component bar charts
  - Percentage bar chart
  - Multiple bar charts
  - Principles of bar charts construction
  - Pie charts
- Graphs Presentations
  - Curves
  - Principles of graph construction
- Array presentation
- Frequency distribution
  - Cumulative frequency tables
  - Cumulative frequency
  - Relative Frequency
  - Cumulative Frequency Curve (Ogive)
  - Frequency polygon curve
- Histograms
- Break even charts
- Moving average
- The Z charts
- Lorenz curve.

- Electronic Presentation data

Unit IV: Calculation of Measures of Central Tendency 48 Hrs

- Calculation and interpretation of:
  - Ungrouped and Grouped data
    - Mean
    - Median
    - Mode
- Median using Cumulative frequency curve
- Finding mode using histogram
- The geometric mean
- Electronic computation measures of central tendency

Unit V: Computation and presentation of Measures of Dispersion 48 Hrs

- Quartile deviations
- Deciles
- Percentiles
- Range
- Variance
- Standard deviation
- Skewness
- Coefficient of variation

- Mean deviation from the mean
- Scatter diagrams
- Lines of regression
- Correlation
- Coefficient of correlation
- Coefficient of rank correlation.
- Electronic computation measures of dispersion

Unit VI: Probability and normal distribution **24 Hrs**

- Probability
- Normal Distribution
    - Standard normal deviate
    - Binomial distribution
    - Poisson distribution
    - Confidence interval
    - X^2- test/ Chi-square
    - t-Test
- Electronic computation of probability and normal distributions

Learning Strategies

- Learner-centred
- Discussion
- Theory and Practical training integrated
- Consideration of both individual and group based practices/exercises
- Holistic project
- Lecture
- Group discussion
- Visiting health facilities
- Application exercise in a classroom
- Practical exercise
- Assignments
- Independent study of specified topics

Resource Requirements

Training-, Teaching- and Learning Materials

Trainer's Guide

- Reference manuals and books

- **Learners Guide**
    - Handout
    - Text books
    - Laptop
    - LCD

- Skills lab
- ONLINE LIBRARY
- E-books

- **Reference Manual and Reference Books**
  - Harper, Statistics, 6th edition,
  - Koch G., Basic Applied Statistics and Analysis, Delmar Thompson publishers, 2nd edition, 2000,
  - Statistical Methods By Gupta

MODULE ASSESSMENT

Assessment Methods and Schedules

- For theory papers, the questions will be MCQs, matching, True or false and easy administered in the mid semester, end of semester and final qualifying examinations.

  Practical examinations will be based on OSPE type in National, provincial and District

8. MODULE TITLE : HEALTH INFORMATION SYSTEM

Time: 60 **Hours** **06 CREDIT S**

Module Competence

The course is designed to equip the health records and information officers' students with the competences that will enable them organize and manage health information system.

Learning outcomes

1. Describe health information
2. Describe the organisation of health information systems in Kenya
3. Describe the needs for health information services
4. Describe the sources of health information
5. Describe the current national standard forms used in collecting data required for the health information services
6. Organize and manage the procedures for completing and forwarding health information services reports, accurately and promptly
7. Apply ICT in Organization and manage the procedures for completing and forwarding health information services reports, accurately and promptly
8. Organize and manage the collection, collation , analyzing , presentation and dissemination of health information

Unit of competency

Organise and Manage Health information system

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO HIS	04
UNIT 2	ORGANIZATION OF HEALTH INFORMATION IN KENYA	04
UNIT 3	HEALTH SECTOR INDICATORS	04
UNIT 4	DATA COLLECTION, COLLATION AND VALIDATION	10
UNIT 5	USE OF COMPUTERS IN HIS	06
UNIT 6	DATA ANALYSIS AND INTERPRETATION	06
UNIT 7	INFORMATION PRESENTATION AND DISSEMINATION	02
UNIT 8	PRACTICAL	24

Content

Unit I: Introduction to HIS **4HR**

- Description of health information
- Historical background health information services in Kenya
- Concept of health information services (WHO)
- Goals of Health information System
- The value and importance of health information
- The role of health information in managing health activities and socio economic activities.
- Health Information System resources, policies and regulations
- Outline the link between health information services and the user

UNIT II: Organization of Health Information System in Kenya

2. Describe the Tiers of care
    a. Tier One- Community Level
    b. Tier Two- Dispensary and Health Centres
    c. Tier three- District and Sub district hospitals
    d. Tier Four-National referral

UNIT III: Various Health Data sources

4. Describe various National tool used in collection of information
5. Describe the Sources of health information3
6. Discuss various type of tools e,g
    a. Primary
        i. Registers
        ii. Forms
    b. Secondary
        i. Weekly notification of infectious diseases
        ii. Monthly Notification of Infectious disease
        iii. Outpatient Morbidity Report
        iv. inpatient morbidity mortality report forms
        v. District out-patient morbidity summary forms
        vi. Integrated RH, HIV, Malaria, TB and Nutrition
        vii. Vaccine and Immunization
        viii. Service workload
        ix. Nutrition Monthly Reporting
        x. HIV reporting tools
        xi. Community Based Health information system (CBHIS)
        xii. DHIS
        xiii. GIS
        xiv. MFL
7. Explain the Procedures of completing H.I.S reporting tools

UNIT III: Health Sector Indicators:

3. **Describe the Health Sector indicator Sources**
   - **A. Surveys**
     - f. Types of surveys
       1. Baseline survey
     - g. Planning of a survey
     - h. conducting survey
     - i. Evaluation Survey
   - ❑ Use of survey findings for both on-going and final evaluation.
   - ▪ Demographic data
   - ▪ Health activities
   - ▪ Health status
   - ▪ Resources
   - ▪ Community information
   - **B. Statutory reporting tools:**
     - a. Birth **registration** and notification
     - b. Death **registration** and notification
     - c. Statutory agencies (Central Bureau of Statistics Attorney General Chambers)

4. **Discuss the Health sector indicators**
   - A. Domains
     - a. Input
     - b. Process
     - c. Output
     - d. Impact
   - B. Calculation of various health indicators, Immunization rates , coverage rate, Maternal child health, Maternal death rate, Child survival rate, Antenatal and post natal coverage rate, Response Rate, Family planning Acceptance rate, Continuation rate ,Dropout rate coverage rate, Morbidity rates, Prevalence and incidence rates

Unit IV: Data Collection, collation and validation 10 Hr

- ❑ Explain procedures of completing various H.I.S report tools e.g completion of O.P.D tally sheet, immunization/EMR and others
- ❑ Complete the various data collection tools
- ❑ Explain the validation procedure
- ❑ Explains data extraction and collation from the various reporting tools
- ❑ Explain the various trends displayed from the tools

UNIT V The use of Computers in HIS 6 Hrs

1. Describe Data Handling
2. Computer application

c. The role of computers in health information system

a. Apply relevant existing HIS softwares – EMR, DHIS, MFL ETC
b. Computer operations
    i) Preparation of data entry sheets
    ii) Procedure of computer data in-put and out-put
    iii) Various in-put media
    iv) Computer operation (Micro and Mini computer)
    v) Validation of data
    vi) Data processing e.g. analysis
c. Explain the various Information output from computer.

Unit VI: Data analysis and interpretation 6 Hr

- Describe Computation of various health indicators
  - Target setting
  - Response rate
  - Immunization coverage rate,
  - Maternal child health
  - maternal death rate,
  - child survival rate
  - antenatal and post natal coverage rate
  - Family planning, Acceptance rate, Continuation rate ,
  - Dropout rate
  - coverage rate
  - Morbidity rates
  - Prevalence and incidence rates
  - Data interpretation
  - Computer use in HIS

Unit VII: Information presentation and dissemination 2 Hr

- Describe the procedures for dissemination of health information reports
    - Administrative
    - Routine
- The need for accuracy, thoroughness, timeliness and promptness of information.
- Explain determination of suitable methods of information Presentation
- Outline the importance of information Usage for evidence based decisions

Unit Vii: Practicum

Learning Strategies/Methods

- Learner-centred
- Discussion
- Theoretical and Practical training integrated
- Consideration of both individual and group based practices/exercises
- Holistic project
- Lecture

- Group discussion
- Visiting health facilities
- Application exercise in a classroom
- Practical exercise
- Assignments
- Independent study of specified topics

Resource Conditions

Training-, Teaching- and Learning Materials

- Computer Lab with internet
- Trainer's Guide
  - Reference manuals and books
- **Learners Guide**
  - HIS Policy
  - Kenya ICT Policy
  - NHSSP 2
  - HIS Strategic Plan
  - Vision 2030
  - Handout
  - Books
  - Current Text books
  - Journals- AHIMA etc
- **Reference Manual and Reference Books**
  - Abstracts of World Health Organisation on Health Information Systems.
  - Manual on Health Information System
  - Journals and periodicals
  - Mervat Abdelhak, et.al, Health Information: Management of a Strategic Resource, 2nd edition, 2001, USA
  - Merida L. Johns, Health Information Management Technology, An Applied Approach, 2nd edition, AHIMA, 2007, Chicago, Illinois
  - Michelle A. Green, et. al, Essentials of Health Information Management, Principles and Practices, 2005, USA
  - WHO, Design and Implementation of Health Information Systems, 2000, Geneva

MODULE ASSESSMENT

Assessment Methods and Schedules

1. For theory papers, the questions will be MCQs, matching, True or false and easy administered in the mid semester, end of semester and final qualifying examinations.
2. Practical examinations will be based on OSPE type in National, provincial and District

ADDITIONAL RESOURCES

International Monetary Fund (IMF). 2006. "Data Quality Assessment Framework." Washington,

Lafond, A., and R. Field. 2003. *The Prism. Introducing an Analytical Framework for*

Understanding Performance of Routine Health Information System (draft). RHINO Second

International Workshop, September 20–October 4, 2003, Eastern Cape, South Africa,

MEASURE Evaluation, USAID, JSI, the Equity Project.

Lippeveld, Theo, R. Sauerborn, and C. Bodart. 2000. *Design and Implementation of Health*

Information Systems. Geneva: WHO.

United Nations. 2006. "Fundamental Principles of Official Statistics and Related Sets of

United Nations Children's Fund (UNICEF). 2006. *The State of the World's Children 2006.*

WHO. 2005. *Review of Health Information Systems in Selected Countries*. Geneva: WHO.

WHO and UNICEF. 2005. *Annual WHO/UNICEF Joint Reporting Form.*

WHO. 2006. *The World Health Report 2006.* Geneva:

World Bank. 2006. *World Development Indicators.* Washington, DC: World Bank.

9. MODULE TITLE : HEALTH SYSTEM MANAGEMENT

Time: 180 **Hours** **18 CREDIT S**

Module competence:

This module is intended to equip the health records and information student with knowledge, skills and attitudes in leadership & management to enable him/her manage health records and information services.

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO LEADERSHIP AND MANAGEMENT	30
UNIT 2	ORGANIZATION OF HEALTH CARE SERVICES	*
UNIT 3	HUMAN RESOURCE MANAGEMENT	44
UNIT 4	HEALTH ECONOMICS	16
UNIT 5	COMMODITY AND SUPPLIES MANAGEMENT	10
UNIT 6	INTRODUCTION TO PROJECT MANAGEMENT/PLANNING	08
UNIT 7	DISASTER MANAGEMENT	06
UNIT 8	COMMUNICATION SKILLS	24
UNIT 9	PUBLIC RELATIONS & CUSTOMER CARE	12

Module Outcomes

1. Describe leadership and management practices
2. Describe the health organizational structure of the health care system
3. Demonstrate effective communication practices
4. Explain the concepts, principles and practices of human resource management in the health care system.
5. Discuss commodity and supplies management in the health sector.
6. Demonstrate the ability to manage health projects
7. describe the financial resource management processes
8. demonstrate the ability to manage disasters
9. explain the concept of customer care and the relationship between the customer and service

Module Content

Unit 1: Leadership and management: Concepts, theories, styles, practices; Principles of management, core values, policies, group dynamics, definitions, concepts of change management; Relationship between leadership and management; roles

and functions; Organizational behavior and group dynamics- team formation; Mission and vision.

Unit 2: Organization of health services: Organization structure: purpose, types, functions; Organizational structure of the health care system; structures, functions; Health services delivery; levels of service, health services at each level, actors, cadres, referral system in Kenya

Unit 3: Communication Skills: Basics of effective communication; Effective Communication skills; Public speaking, report writing; Networking, advocacy, negotiation partnership, Inter/intra-sectoral collaboration; Conducting meetings; Teaching and learning approaches (facilitation skills & mentorship)

Unit 4: Human Resource Management: Human Resource Management; concepts, principles; Practices in human resource management; Recruitment, orientation, deployment Performance management, counseling and coaching; motivation, work climate, conflict resolution; grievances; Code of Regulation, managing change; Human Resource Development; Cycle, continuous professional development, job description, job analysis; Professionalism and work ethics, medico – legal issues, occupational hazards, workman compensation act; Disciplinary process; decision – making; Planning meetings

Unit 5: Commodity and supplies management: Commodity Management Cycle: selection, procurement, distribution and use; Inventory management procedures; Procurement procedures; Ethical and legal implications in commodity and supplies management

Unit 6: Introduction to Project management/planning: Project Management; Principles, concepts, the importance of planning; Project Planning: Proposal writing; Types of plans- strategic plans, Annual operational plans, annual, departmental and individual plans; Project planning process; Cycle, situation analysis, feedback, prioritization, developing implementation plans, budgeting, techniques for public involvement.

Unit 7: Health Economics: Demand and supply; Sources of health care financing; reimbursement; aspects of health service/product quality; Financial accounting systems and mechanisms; Accounting documents; Imprest, vouchers, per diem, Facility Improvement Fund (FIF), Salary, Allowances, Vote Books; Budget types

Unit 8: Disaster management: Common terms in disaster management; types of disasters; stages of disaster; disaster preparedness; types of responses to disaster; disaster mitigation

Unit 9: Public relations & Customer care: Concept of clients care: definition;, build client confidence in the health care provision, relationship between client/customer and health care organization, organization charter, factors in customer satisfaction, measures of customer care,

Teaching methods

- Lectures
- Discussions
- Illustrations/demonstrations
- Case studies
- Role play

- Group work
- Self directed learning

Assessments methods

- CATS, quizzes, written assignment
- Evaluation – end of semester exam

References

1. Armstrong, M (2001): A hand book of Human resource Management Practice. Kegan
2. Beerel, Annabel. *Leadership through Strategic Planning*. London: International Thomson Business Press, 1998.
3. Diane Huber, 2000, *Leadership and Nursing Care Management*
4. Guerrieri, D.J. et al (1988): Houghton Mifflin Accounting: Concepts/ Procedures/Applications. Houghton Mifflin Co. Boston, U.S.A.
5. Health Sector Reform Secretariat documents (on Health Sector Reform website)
6. Hickman C. et al (1996): The Fourth Dimension: The next Level of Personal and Organizational Achievement. John Wiley & Sons- New York, U.S.A.
7. Koontz, Horold (1988): Management. Mc Graw Hill Book Co. ;New York
8. Kreitner. R (1980) Management: A problem solving process; Houghton Mifflin co.
9. Kreitner. R and Kinicki. A (2001): Organizational behaviour 5th Ed. Hill, Boston, Massachusetts
10. Lauren R. et al (1981): Time management for Executives. Rupa &Co. New Delhi, India.
11. Litwin, George H., and Robert A. Stringer, Jr. *Motivation and Organizational Climate*. Cambridge: Havard University Press, 1968.
12. Management Sciences for Health. "*Business Planning to Transform Your Organization.*" The Manager vol. 12, no. 3, 2003.
13. Management Sciences for Health. Financial Management Tools available on the MSH Health Manager's Toolkit. Available at: http://erc.msh.org/toolkit
14. Management Sciences for Health. Managers Who Lead: *A Handbook for Improving Health Services- Available on the LeaderNet website*: http://erc.msh.org/leadernet in the Leadership Facilitator section.
15. McCauley, Cynthia D., Russ S. Moxley, and Ellen Van Velsor, eds. *The Centre for Creative Leadership Handbook of leadership development.* Greensboro, NC: Centre for Creative Leadership; San Francisco: Jossey-Bass, 1998.
16. Ministry of Medical service (MOMS) strategic plan 2008 - 2012
17. Ministry of Public Health and sanitation (MOPHS) strategic plan 2008 - 2012
18. MOH (2005): Reversing the Trends- The Second National Sector Strategic Plan of Kenya, 2005-2010, Health Sector Reform Secretariat.
19. Mburu, H.K. (2007): Basic Accounting .Paulines Publications Africa, Nairobi Kenya.

10. MODULE TITLE : RESEARCH METHODOLOGY

Time: 240 **Hours** **24 CREDIT S**

Module competence:

This course is designed to equip the students with the necessary knowledge, skills and attitudes in research methodology that will enable them participate or carry out research related to health care and community.

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO RESEARCH	14
UNIT 2	IDENTIFICATION OF A STATISTICAL/RESEARCH PROBLEM	24
UNIT 3	RESEARCH DESIGN /METHODOLOGY	32
UNIT 4	FINDINGS, DISCUSSIONS & RECOMMENDATIONS	20
UNIT 5	REPORT WRITING/DOCUMENTATION	30
UNIT 6	PRACTICUM	120

Module outcome:

1. Describe research and it's contribution towards solving priority problems in health care
2. Design and carry out research

Module content

Unit 1: Introduction to research: Definition of research, uses of research, types of research- experimental and non- Non experimental;

Unit 2: Identification of research problems: Approaches to identifying a research problem; statement of the problem; justification; development of objectives; research questions/hypothesis; review of literature; sources of information, citing references, research plan/proposal stages

Unit 3: Research design/methodology: Research format and research design; Description of sample & sampling techniques –probability and non-probability; study area; population and sub-populations; variables; Ethical considerations, inclusion-exclusion criterion; Construction of research instrument; pilot survey; pre-testing; Actual data collection

Unit 4: Findings, discussions & recommendations: Data cleaning & classification; data processing and analysis; Statistical analysis, discussions & recommendations

Unit 5: Report writing /documentation: Format; steps

Unit 6: Practicum: Design and carry out research in the field

Teaching methods

- Lectures
- Group discussions/ Group work
- Self directed learning

Assessments methods

- CATS, quizzes, assignments, written reports/dissertation
- Evaluation – end of semester exam (MCQs/essay

References

1. Altman D.G (1991): Practical statistics for medical research. Chapman and Hall, London
2. Munro B.H (2001): Statistical methods for health care research. Lippincott
3. Kumar, (1991): Methods and Techniques of Social Research. Lakshmi Navan Agarwal Educational Publishers, Agra, India.
4. Management Sciences for Health. "Conducting Local rapid Assessments for the District Level." *The Manager* vol. 7, no. 1, 1998.

11. MODULE TITLE : MONITORING AND EVALUATION

Time: 40 **Hours** **04 CREDIT S**

Module competence

This course is designed to equip the students with the necessary knowledge, skills and attitudes in designing monitoring and evaluation system that will enable them monitor and evaluate health related interventions

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO MONITORING AND EVALUATION	04
UNIT 2	QUANTITATIVE AND QUALITATIVE DATA	10
UNIT 3	DESIGNING M &E SYSTEM	20
UNIT 4	REPORT WRITING AND PRESENTATION	06

Module outcome

1. Describe concepts, principles and processes of monitoring and evaluation
2. Design and implement M&E system

Module content

Unit 1: Introduction to M&E: Operational definitions of monitoring, evaluation, review and assessment; Difference between monitoring, evaluation; Importance of monitoring and evaluation in project/programme development; Types of monitoring and evaluation

Unit 2: Quantitative and qualitative data: Different types of data; collection tools and methods for data collection; qualitative and quantitative data analysis tools and methods

Unit 3: Designing M&E system: definition, aims and objectives of the system; Performance indicators; selection of relevant information and indicators; tools and methods relevant for data collection and analysis in a M&E system; organization for M&E; presentation and use of results derived from a M&E system.

Unit 5: Report writing and presentation: Format; steps, Report writing skills, Report presentation skills; Organizing and conducting user workshops

Teaching methods

- Lectures
- Group discussions/ Group work
- Self directed learning

Assessments methods

- CATS, quizzes, assignments, written reports/dissertation
- Evaluation – end of semester exam (MCQs/essay

References

12. MODULE TITLE : COMMUNITY HEALTH

Time: 90 **Hours** **09 CREDIT S**

Module Competencies

1. The module is designed to enable the learner acquire knowledge and skills on socio demographic characteristics geared towards interventions that will improve the health of the community.
2. The course is designed to equip the learner with the necessary knowledge, skills and attitudes on community diagnosis and application techniques to carry out community researches.

UNITS		**HOURS**
UNIT 1	INTRODUCTION AND CONCEPTS IN COMMUNITY HEALTH	**04**
UNIT 2	DISEASE PREVENTION	06
UNIT 3	COMMUNITY DIAGNOSIS	06
UNIT 4	THE ENVIRONMENT AND HEALTH	04
UNIT 5	COMMUNITY HEALTH SURVEYS	06
UNIT 6	DRUG AND SUBSTANCE ABUSE	04
UNIT 7	PHC	08
UNIT 8	COMMUNITY STRATEGY	06
UNIT 9	HIV/AIDS AND STI	08
UNIT 10	COMMUNICABLE AND NON COMMUNICABLE DISEASES	08
UNIT 11	MATERNAL AND CHILD HEALTH	04
UNIT 12	NUTRITION AND HEALTH	04
UNIT 13	PLANNING AND EVALUATING COMMUNITY HEALTH SERVICES	06
UNIT 14	PRACTICAL SESSION (CARRY OUT COMMUNITY DIAGNOSIS IN THE COMMUNITY UNIT, PLAN A COMMUNITY HEALTH SURVEY)	16

Module Outcomes

3. Apply knowledge and skills in designing and implementing community health interventions
4. Apply knowledge and skills in monitoring and evaluation of community health interventions
5. Apply knowledge and skills in conducting community research

Module Content

Concepts and introduction to Community Health: The aims of community health services, Definition of terms used in community health(Population coverage, High risk

groups, Need for health services, Demand for health services, Primary health care), Needs and demands of health services, Features of risk of diseases, Services in PHC, Problem solving in community medicine, Millennium Development Goals.

Disease Prevention: Primary, Secondary and Tertiary prevention, Health Education at all stages.

Community Diagnosis: Description of community diagnosis, Steps in carrying out community diagnosis as compared with the steps taken in making patient diagnosis, Types of information in community diagnosis and intervention sources, Aims of community diagnosis, Evaluation of community diagnosis.

The Environment and Health: Definition of key terms, main groups of environmental factors that affect our health, The relationship of an individual to his family and community, Members of health team and their responsibilities, How beliefs and customs affects the health of an individual, Role of community in preserving the environment.

Community Health Surveys: Definition of terms, Types of surveys, Reasons for carrying out surveys, Planning surveys, Conducting the survey, Evaluation, Feedback, Biased sample and response rates in relation to survey, Errors that may lead to inaccuracy when completing survey tools, Points to be considered in constructing a questionnaire (see statistics), Various methods of presenting information in community health, Plan a community survey (practical session).

Drug and Substance abuse: Definition of key terms, Classification of drugs of abuse, commonly abused drugs, Effects of drugs on body systems, Alcohol abuse, alcohol associated illnesses, Effects of drug abuse on individuals, households and community**,** BCC strategies

Primary Health Care: Definition of primary health care/community based health care, Principles and concepts of Primary Health Care, Strategies of primary health care, Elements of Primary Health Care, Levels of Health Care Service, Roles and functions of Health Records and Information Officer in the implementation of primary health care programmes, Roles and functions of community and health workers in the primary health care programmes

Community Strategy: Introduction to Community Strategy, Strategic objectives, Roles of Household and communities, Implementation framework and process, Concept of community mobilization, involvement and participation, Procedures of Community based research, Income generating activities as a approach for sustainability of primary health care programmes, Community skills in training community resource persons

HIV/AIDS and STI: Causes, Spread, Impact, Management, Prevention,

Communicable and Non Communicable Diseases: Introduction to communicable diseases, Agent, host and environment, The transmission cycle, Principles for managing communicable disease, Investigation and control of epidemics, Control and eradication methods, Introduction to non communicable diseases, Risk Factors, Prevention Strategies, Basic treatment, Community participation in disease control programmes

Maternal and Child Health: Introduction, MCH Services, The MCH clinic, Immunization, Health education, Community based MCH care.

Nutrition and Health: Introduction, Basic nutrition, Community nutrition, Nutrition in pregnancy and lactation, Malnutrition, Nutrition and other related conditions

Planning and Evaluating Community Health Services: Introduction, Objectives, Community health cycle, Choosing priorities, Setting goals, Organization, Selecting measures of success, Measuring outcomes, Evaluation of programmes.

Practical Session (Community diagnosis and planning a community survey): Visit a community unit, Observe the organization of health services at the community unit, Data collection tools, Linkage between community unit and facility, Community Diagnosis, Plan a community survey.

Learning Methods

- Lectures
- Group Discussions
- Practical (Community diagnosis and Plan a community survey)
- Assignments

Evaluation Methods

- CATs
- Take away assignments
- End Semester Exam

Reference Manual and Reference Books

McCusker, *Epidemiology in Community Health*,

Manual of Community Health by AMREF(more referece)

13. MODULE TITLE : HUMAN PSYCHOLOGY

Time: 40 **Hours** **04 CREDIT S**

Module Competencies:
This module is meant to equip the learners with knowledge, skills and attitude to effectively cope with and provide psychosocial support to clients, patients and staff.

UNITS		**HOURS**
UNIT 1	Introduction to Psychology	04
UNIT 2	Personality	06
UNIT 3	Anxiety and Conflict	04
UNIT 4	Perception	04
UNIT 5	Socialization	04
UNIT 6	Motivation	04
UNIT 7	Burn out and Stress Management	06
UNIT 8	Counselling	08

Module Outcomes:

1. Apply the knowledge and skills to cope with and counsel patients, clients and staff.
2. Apply the knowledge and skills in promoting effective public relations

Module Content

Introduction Psychology: Description; history, branches
Personality: Types, determinants of personality and theories
Anxiety and Conflict: Definitions, Types, Causes and Resolution,
Perception: Theories and effects on human behavior
Socialization: Introduction to socialization Process and factors
Motivation: Definition, motivation factors, theories
Burn out and Stress Management: Definition, Causes, Signs and symptoms, Management
Counselling: Definition, self-awareness, theories of counseling, counseling skills, counselling process

Learning Methods

- Lectures
- Group Discussions
- Role plays
- Assignments
- **Evaluation Methods**
- CATs
- Take Away assignments

- End Semester Exams

References:

Essentials of understanding psychology by Robert Feldman (1997) Third edition

14. MODULE TITLE : DEMOGRAPHY

Time: 40 **Hours** **04 CREDIT S**

Module Competencies

The course is designed to equip the learner with the knowledge and skills for collection, analysis, interpretation, presentation and dissemination of health demographic information.

UNITS		**HOURS**
UNIT 1	**Introduction and concepts of Demography**	06
UNIT 2	Population	18
UNIT 3	Fertility Measures	08
UNIT 4	Mortality Measures	08

Module Outcome

1. The learner should describe the sources and use of demographic data

2. The learner should be able to demonstrate techniques of standardising mortality and fertility measures

Module Content

Introduction and concepts of Demography: Introduction to demography, Description of measures in demography, Importance and uses of demographic data, Sources of demographic data, population policy.

Population: Definition, Population census, Population growth, Factors and effects of population growth, Population control, demographic transition theories, Definition of sex composition, Determinants of sex composition, Calculations of sex ratio, Definition of age composition, Determinants of age composition, Calculation of the age dependency ratio, Measures of age, Population Pyramids.

Fertility Measures: Definition, Description and calculations of Measures of fertility, Standardization, Interpretation of fertility measures

Mortality Measures: Definition, Description of historical background/development of mortality measurement, Description of mortality characterization, Description and calculation of measures of mortality, Standardization, Interpretation of measures of mortality, Life tables.

Learning Methods

- Lectures
- Group Discussions
- Demonstration
- Assignments

Evaluation Methods

- CATs
- Take Away assignments
- End Semester Exam

References

A manual for Demography by Hannington Kiwinga (More)

15. MODULE TITLE : EPIDEMIOLOGY

Time: 60 **Hours** **06 CREDIT S**

Module Competencies

1. The course is designed to equip the learner with the knowledge and skills on disease determinants and distribution for effective prevention and control of diseases.
2. To equip the learner with knowledge and skills to monitor disease trends and detect epidemics for timely intervention

UNITS		**HOURS**
UNIT 1	INTRODUCTION TO EPIDEMIOLOGY	08
UNIT 2	SOURCES OF EPIDEMIOLOGICAL DATA	04
UNIT 3	MEASURES OF MORBIDITY AND MORTALITY	06
UNIT 4	MEASURES OF ASSOCIATION	06
UNIT 5	DYNAMICS OF DISEASE TRANSMISSION	08
UNIT 6	INVESTIGATION OF DISEASE OUTBREAKS	06
UNIT 7	DISEASE SURVEILLANCE	08
UNIT 8	EPIDEMIOLOGICAL STUDY DESIGNS	08
UNIT 9	PRINCIPLES OF DISEASE MEASUREMENTS	06

Module outcomes

1. The learner should be able to describe the distribution and determinant of diseases
2. The learner should be able to carry out epidemiological studies

Module content

Unit1 Introduction to Epidemiology; Definition of epidemiology and its origin, terms used in epidemiology, determinants of disease,occurrences of diseases, ,natural history of disease, level of disease prevention, ecological approach to disease causation Scope of, epidemiology, uses and purposes of epidemiology

Unit2 Sources of epidemiological data; Census, Vital statistics/registration systems, Health service records (health information sources), Morbidity and mortality surveys, Demographic
and health survey

Unit3 Measures of Morbidity and Mortality; Rates, ratios and proportions**,** Measures of morbidity- Incidence, Prevalence, Measures of mortality

Unit4 Measures of Association; Relative Risk, Absolute Risk, Attributable Risk, Odds Ratio, Causation, Causal and non-Causal relationships

Unit5 Dynamics of disease transmission; Communicable disease epidemiology, Chain of disease transmission Methods of controlling communicable disease, Vaccine preventable diseases, Expanded programme on immunization (EPI).

Unit6 Investigation of disease outbreaks; Definitions, Types of epidemics, detection of epidemics, Investigation of epidemics/outbreaks, Control of epidemics

Unit7 Disease Surveillance; Definitions, Types of surveillance Purpose of surveillance, Components of surveillance, Sources of surveillance data, Steps in surveillance, strategy in disease surveillance -Integrated Disease Surveillance and Response (IDSR)

Unit8 Epidemiological Study Designs; Experimental studies, Observational studies, Descriptive studies, Analytical studies, Cross-sectional studies, longitudinal studies, Case-control studies

Unit9 Principles of Disease Measurements ;Reliability, Observer variation, Subject variation, Variability, Test bias and confounding , error and systematic error, Repeatability, Validity, Content, concurrent, predictive and construct, Sensitivity and specificity

Learning Methods

- Lectures
- Group Discussion
- Assignments

Evaluation Methods

- CATs
- Take Away assignments
- End Semester Exam

References

Leon Gordis 4th Edition, Epidemiology
Essentials of Epidemiology in Public Health, Ann Aschengrau and George Seage III,
Medical epidemiology by Raymond S Greenberg,
Epidemiology for public health practice by Robert Friis and Thomas Sellers

COURSE DESIGN AND ORGNISATION FOR THEORITICAL INSTRUCTION: MODULES UNITS				
MODULE NO	**MODULE NAME**	**HRS**	**MODULE UNITS**	**HRS**
SEMESTER 1 YEAR 1				

RECOMMENDATIONS ON NEXT STEPS

The foregoing provides a first draft of the reviewed HRI certificate and diploma curricula. Not surprisingly, the 2 curricula still contain gaps and there is no consensus various issues, including:

1) Most up to date 'front matter' (Vision, mission etc.)

2) Sequencing of modules;

3) Conciseness of module competence;

4) Conciseness of modules outcomes;

5) Module Entry Requirements;

6) Module Resource Requirements;

7) Time allocated to deliver existing and proposed modules;

8) Final format of curriculum including completion of summary tables (after the above have been addressed).

It is therefore recommended that a follow-up workshop comprising a smaller group of experts, with 1-2 representatives for each of the 6 groups that helped put together the draft curriculum be convened to address the above issues and also carry out an audit as to whether the curricula proposed have responded adequately to the TNA report, the HRI benchmarks task force report and applicable MOH policy documents that formed the basis of the curriculum review.

The team of reviewers may be provided with selected subject matter experts from the health sector.