

MODULE 44: PEDIATRICS AND CHILD HEALTH III

Code: PCH 312
Hours: 20
Credit: 02

Prerequisite: Basic sciences (Anatomy, Physiology, Clinical methods, Paediatrics I and II)

Module competence

This module is designed to equip the learner with knowledge, skills and attitudes in the management of paediatric diseases and conditions.

Module learning outcome

By the end of this module, the learner should:

1. Manage endocrine disorders
2. Manage neurological disorders

Module Units

Unit name	Hours	
	Theory	Practical
3. Endocrine disorders	8	0
4. Neurological disorders	12	0

Module content

Endocrine disorders: pancreatic gland disorders, predisposing factors, aetiology, pathophysiology, features, complications and management of DM, DKA, diabetes insipidus; Adrenal gland disorders: predisposing factors, aetiology, pathophysiology, features, complications and management of cushings' syndrome, addisons' disease; pituitary gland disorders; aetiology, pathophysiology, features, complications and management of cretinism, acromegaly; gonadal disorders: ambiguous genitalia, spadias, thyroid and parathyroid diseases: aetiology, pathophysiology, features, complications and management of hypo/hyperthyroidism.

Neurological disorders: review of anatomy and physiology; infections: aetiology, pathophysiology, features, complications and management; convulsive disorders: aetiology, pathophysiology, features, complications and management.

Teaching Strategies

Interactive lectures, Small Group Discussions and Small Group Assignments, Case studies

Teaching/Learning Resources

Computers, LCD Projector, white board and permanent markers.

MODULE 45: SURGERY III

Code: SUR 312
 Hours: 20
 Credit: 2

Prerequisites: Human Anatomy, Clinical Methods, Pharmacology, Medical Physiology and General Pathology.

Module Competence

This module is designed to enable the learner identify and manage head, neck and nervous system conditions.

Module Outcomes

At the end of this module, the learner should;

- Diagnose and manage head and neck conditions
- Manage nervous system disorders

Module Units

Unit Name	Hours	
	Theory	Practicals
1. Head and Neck Conditions	10	0
2. Nervous System Conditions	10	0

Module Content

Head and Neck Conditions; head and neck tumours, cleft lip and palate, ranula. **Nervous System Conditions;** congenital anomalies, hydrocephalus, head injury.

Teaching Strategies

Interactive Lectures, Small Group Assignments, and Small Group Discussions

Teaching/Learning resources

Computer, LCD Projector, White Board Markers, Permanent Markers, White Board, Charts, Flip Chart, Chalk Board.

Assessment strategies

Formative: Continuous Assessment Tests, Individual Assignments and Group Assignments

Summative: End of Semester Examination

MODULE 46: REPRODUCTIVE HEALTH III

Code: REH 312
Hours: 20
Credit: 2

Prerequisite(s); RH I & RH II

Module Competence

This module is designed to enable the learner manage reproductive health conditions

Module Outcomes

At the end of this module, the learner should;

1. Provide family planning and counseling services
2. Evaluate sexual dysfunction and infertility
3. Provide gender-based violence services

Module Units

Module Name

	Hours	
	Theory	Practical
Family planning	6	2
Sexual dysfunction and Infertility	4	0
Genital tract trauma, prolapse and Repair	2	2
Gender Based violence	4	0

Module Content

Family Planning; introduction to family planning concept, types: natural (fertility awareness) methods, artificial Methods: hormonal, barriers, IUCD, surgical, emergency contraception. Family planning counselling using GATHER approach. Components of adolescent and youth friendly reproductive health services. **sexual dysfunction and infertility**; impotence, gynismus, dyspareunia, libido, sexual deviations. **infertility**; definition, types, causes, evaluation, management modalities. **genital trauma, prolapse and repair**; general principles, causes, clinical findings, examination techniques, types of trauma, degree of tear, perform repair 1st and 2nd degree repair, assist in the repair of other degree of tears. obstetric fistula- VVF, WVF, as a major complication; pelvic organ prolapse: uterine prolapse, rectocele, cystocele and terocele. **Gender Based Violence**: definition; rape; FGM.

MODULE 47: MEDICINE III

Code: MED 312

Hours: 20

Credit: 2

Pre-requisites: Medicine I and II

Module Competence

At the end of this module the learners should be able to make a diagnosis and manage common medical conditions affecting nervous and musculoskeletal systems.

Module Outcomes

By the end of this module, the learner should;

1. Demonstrate understanding in diagnosis and management of central and peripheral nervous system diseases
2. Demonstrate understanding in diagnosis and management of musculoskeletal system diseases

Module units

Unit name	Hours	
	Theory	Practicals
1. Nervous system	10	0
2. Musculoskeletal system	10	0

Module contents

Nervous System; overview of anatomy and physiology of central nervous system, history taking, physical examination, investigations in central nervous system, features of CNS disorders, upper and lower motor neurons, headache, dizziness, meningitis, encephalitis, coma, space occupying lesions, cerebral vascular event, epilepsy, parkinsonism, alzheimer's, peripheral nervous system, disorders of cranial nerve palsies. **Musculoskeletal System Disorders;** overview of anatomy and physiology of musculoskeletal system, history taking, physical examination, investigations in musculoskeletal system, features of musculoskeletal disorders, rheumatoid arthritis, gouty arthritis, degenerative arthritis, systemic lupus erythematosus,

MODULE 48: SPECIAL UNITS

Code: SPU314
Hours: 40
Credit: 4

Pre-requisites: Surgery III, Medicine III, Paediatrics and Child Health III, Reproductive Health III and Community Health III.

Module Competence

This module is designed to enable the learner diagnose and manage special conditions.

Module Outcomes

By the end of this module the learner should:

1. Manage ophthalmological conditions
2. Diagnose and manage ENT conditions
3. Apply principles of imaging in management of patients
4. Apply principles of anaesthesia in management of patients
5. Diagnose and manage mental health conditions
6. Manage oncological conditions

Module units

Module Name	Hours	
	Theory	Practicals
1. Introduction to Ophthalmology	8	0
2. Introduction to ENT and audiology	6	0
3. Introduction to Anaesthesia	6	0
4. Introduction Radiology	4	0
5. Introduction Psychiatry	10	0
6. Introduction to Oncology	6	0

Module Content

Introduction to ophthalmology; ophthalmic history taking, eye anatomy, physiology eye examination and vision assessment common eye; eyelid, conjunctiva corneal (bacterial, viral, fungal infection). other eye conditions; allergic eye condition, facial trauma, eye trauma and injury, vitamin A deficiency, introduction to advanced ophthalmology; refraction, color blindness retinoblastoma. ~~Introduction to ENT; anatomy, physiology, history taking, physio~~

examination common ear; chronic otitis media mastoiditis, hearing loss and balance disorders, introduction to audiometry and hearing aids. nasal conditions; epistaxis, sinusitis, nasal polyps cancer of postnasal space (PNS), throat and neck; abnormal growths in the throat, throat cancer, causes of hoarseness. **Introduction to Anaesthesia**; definition, pre operative care, assessment and types. **Anaesthetic agents and stages of anaesthesia**; common drugs and there mode of action, stages of anaesthesia and recovery. post operative care; stages of recovery expected complications. **Introduction to Radiology**; radiation types, indications, types of radiological modalities (X-ray, CT scan MRI, Ultrasound, PET, etc). Radiological investigations and interpretation of results; Ordering (filling of request forms), reading and interpretation (of results or reports) and their use in diagnosis. Therapeutic and interventional radiology. **Introduction to psychiatry**; history taking, mental act, psychiatry admission procedures, assessment common conditions; schizophrenia, acute psychosis, depression and psychiatric counselling. **Introduction to oncology**; neoplasia, diagnosis of neoplasia, grading and staging, treatment, palliative care pain management ethics in oncology.

Teaching Strategies

Interactive lectures, individual and small group tutorials and group assignments.

Teaching/Learning Resources

Computer, overhead projector, LCD projector, white board markers, permanent markers, black board chalk and charts.

Assessment Strategies

Formative; Continuous assessment tests, individual assignments and group assignment

Summative; FQE examination

References and Further readings

Benjamin J, Robert.C, ad Wing J (2019) Cecils essentials of Medicine (9th edition) Elsevier Publishers ISBN13978-1437718997

Colledge (editor 2010), *Davidsons principles and practice of medicine* 21st edition, London.

Davidson (2005), *Macleod's clinical examination*. 11th edition Elsevier Churchill Livingstone publishers ISBN13 978-0071802154

MODULE 49: COMMUNITY HEALTH IV

Code: CHE313

Hours: 20

Credit: 2

Pre-requisite: Community Health III

Module Competence

This module is designed to enable the learner apply concepts of demography, OHS to address drugs and substances abuse.

Module Outcomes

By the end of this module the learner should:

1. Explain concepts of demography in planning health services
2. Manage, prevent and control occupational health conditions and hazards
3. Manage cases of drug and substances abuse in the community

Module Units

Unit name	Hours	
	Theory	Practical
1. Occupational health and safety	10	0
2. Demography	10	0
3. Drug and substance abuse	10	0

Module Content

Occupational Health and safety; Historical background, principles, of occupational classification of occupational hazards, control and prevention, occupation related diseases, Occupational Health and Safety Regulations. **Demography,** definition of terms, population pyramids, dependence ratio, world population trends, Kenya population trends, sources and uses of demographic data, census, types, limitations of census data, population measurements in health, migration, planning for health services. **Drugs and substances abuse;** definition, commonly abused drugs and substances, health effects, management, abuse of prescription drugs, alcohol control Act and NACADA Act.

MODULE 50: HEALTH SYSTEMS MANAGEMENT III

Code: HSM 312
Hours: 20
Credit: 02

Pre-requisite: Health Systems Management II

Module Competence

This module is designed to enable the learner develop competencies in medico-legal cases and corruption management.

Module Outcomes

By the end of this module the learner should:

1. Identify and manage medico-legal issue
2. Identify causes ,effects and preventive methods of corruption

Module Units

Unite name	Hours	
	Theory	Practicals
1. Medico-legal issues	10	0
2. Corruption and anticorruption measures	10	0

Module Content

Medico-legal issues; definitions, professional code of conduct, medico-legal cases and their consequences, regulatory bodies, government laws in healthcare. **Corruption and anticorruption measures;** definition, causes, effects to the economy, preventive measures, public officer conduct and ethics Professionalism, work ethics, medico – legal issues,

Teaching Strategies

Small Group Lectures, Small Group Tutorials and Small Group Assignments.

Teaching/Learning Resources

Computer, LCD projector, white board markers, permanent markers, white board.

MODULE 52: COMMUNITY ATTACHMENT

Code:	CAT 3112
Hours:	240
Credit:	12

Pre-requisite: Knowledge, skills and attitudes gained from basic and clinical sciences modules

Module Competencies

This unit is designed to enable the learner develop the necessary skills and attitudes for work in clinical and community settings.

Module Outcomes

1. Take comprehensive history and perform physical examination on patients in all areas
2. Diagnose, prescribe and treat diseases and conditions
3. Participate in management of clients in MCH/FP clinics
4. Perform patient care procedures in special clinics like Comprehensive Care Centres, Chest and Skin Clinics
5. Observe, assist and perform the prescribed medical/surgical diagnostic and therapeutic procedures
6. Participate in comprehensive patient care and outreach services to the community
7. Plan and carry out school health programmes
8. Carry out surveillance on covid and other infectious diseases
9. Reporting of notifiable diseases
10. Participate in food inspection, market and building inspection, water and sewerage treatment inspection and environmental hygiene practices

Check the log books and clinical guidelines

MODULE 53: PAEDIATRICS AND CHILD HEALTH IV

Code: PCH 322
 Hours: 20
 Credit: 02

Pre-requisites: Paediatrics and child Health (I, II, III IV).

Module Competence

This module is designed to equip the learner diagnose and manage paediatric:- psychiatry, emergencies and paediatric oncology.

Module Outcomes

By the end of this module, the learner should:

1. Diagnose and Manage paediatric psychiatry.
2. Diagnose and manage Paediatric emergencies.
3. Diagnose and manage Paediatric oncology.

Module Units

Unit Name	Hours	
	Theory	Practical
1. Paediatric Psychiatry	6	0
2. Paediatrics Emergencies	8	0
3. Paediatric Oncology	6	0

Module content

Paediatric psychiatry - Predisposing factors, features and management of: Depression, Schizophrenia, Attention deficit disorders, Behavioral difficulties
Paediatric emergencies - Respiratory emergencies; Cardio vascular system emergencies; CNS emergencies; GIT emergencies; near drowning; poisonings Foreign body in the oesophagus, Water intoxication, Hydrocarbons. Organophosphate, ASA, Paracetamol/Datura.
Introduction to paediatric oncology - Common childhood tumours; intracranial tumours; Burkitt's tumours.

Teaching/Learning Resources

Laptop, Computer, LCD projector, white board markers, and permanent markers, white board, Charts, videos, simulators - manikins, dummy, models.

MODULE 54: SURGERY IV

Code: SUR 322
 Hours: 20
 Credit: 2

Pre-requisites: Human Anatomy, Clinical Methods, Pharmacology, Medical Physiology and General Pathology.

Module Competence

This module is designed to enable the learner diagnose and manage disorders of the urogenital system and injuries of the spine.

Module Outcomes

By the end of this module, the learner should;

1. Manage diseases and disorders of Urogenital system
2. Carry out diagnosis and management of injuries of the spine

Module Units

Unit Name	Hours	
	Theory	Practicals
1. Urogenital System Conditions	10	0
2. Injuries of the Spine	10	0

Module Content

Urogenital System Conditions; renal tumours, haematuria and differential diagnosis, conditions of the prostate gland, penile conditions, undescended testis, torsion of testis, scrotal conditions, urine retention. **Injuries of the Spine;** classification of spinal column injuries, mechanism of spine injuries, cervical spine injuries, thoracic spine injuries, lumbosacral spine injuries, management of a spinal injury patient (paraplegia, quadriplegia), prolapsed intervertebral disc.

Teaching Strategies

Interactive Lectures, Small Group Assignments, and Small Group Discussions

Teaching/Learning resources

Computer, LCD Projector, White Board Markers, Permanent Markers, White Board, Charts, Chalk, Chalk Board.

MODULE 55: REPRODUCTIVE HEALTH IV

Code: 55 REH 322

Hours: 20

Credit: 2

Pre-requisite(s); RH I, RH II & RH III

Module Competence

This module is designed to enable the learner provide reproductive health services

Module Outcomes

By the end of this module, the learner should;

1. Diagnose and manage patients with gynecological neoplasms
2. manage the newborn and preterm baby
3. Perform neonatal resuscitation
4. Diagnose and manage neonatal sepsis and jaundice
5. Participate in Maternal and Perinatal Death Surveillance and Response (MPDSR)

Module Units

Module Name	Hours	
	Theory	Practical
1. Gynecological neoplasms	12	0
2. Routine care of the newborn	1	1
3. Neonatal resuscitation	1	1
4. Neonatal sepsis and jaundice	1	0
5. Maternal and perinatal death surveillance and response (MPDSR)	3	0

Module Content

Gynecological Neoplasms; Benign and malignant conditions of the Vulva, Benign and malignant conditions of the Vagina, Benign and malignant conditions of the Cervix, benign and malignant conditions of the Uterus, Benign and malignant conditions of the ovary. **Routine care of the new born** - Definition, immediate care and assessment, basic needs of a new born, immediate cord care, eye care, new born examination, feeding, danger signs & Kangaroo Mother Care (KMC), **Neonatal resuscitation;** Resuscitation; assess breathing, open airway, suction, assess heart rate, chest compression, insertion of NGT feeding, Proficiency with the Apgar scoring system, **Neonatal sepsis and Jaundice;** Risk factors, clinical presentations, investigations, diagnosis, management, prevention, oxygen therapy, Phototherapy. **Maternal and Perinatal Death Surveillance and Response (MPDSR);** Background of clinical and obstetric audit, Definition of terms: maternal death, perinatal death, near-miss, three delays ; MPDSR ,areas of clinical audit, rationale of audit, preventable factors, effective maternal and

MODULE 56: MEDICINE IV

Code: MED 423

Hours: 10

Credit: 1

Pre-requisite: Medicine I, II and III

Module Competence

At the end of this module the learners provide common medical emergency care

Module Outcome

By the end of this module, the learner should:

1. Identify Medical Emergencies
2. Manage medical emergencies

Module Unit

Unit name	Hours	
	Theory	Practicals
1. Medical emergencies	5	0
2. Management of medical emergencies	5	0

Module Contents

Medical Emergencies; overview of BLS and first aid, brief history taking, quick physical examination, investigations, (blood gas analysis, blood sugars, malaria tests, haemoglobin measures, lumbar puncture, radiological imaging etc), **Management of medical emergencies** septicæmic shock, haemorrhagic shock, cerebral malaria, meningitis, sickle cell crisis, acute pulmonary oedema, status asthmaticus, pulmonary thromboembolism, hypertensive crisis, cardiac tamponade, acute renal failure, DKA, hypoglycaemia, Addison's crisis, thyroid storm, hypothyroid coma, hypovolaemic shock, anaphylactic shock, status epilepticus, upper gastro intestinal tract bleeding, poisoning, bee stings, insect bites, snake bites; animal bites.

Teaching Strategies

Interactive lectures, Small Group Tutorials and Small Group Assignments.

MODULE 57: HEALTH SYSTEMS MANAGEMENT IV (ENTREPRENEURSHIP)

Code: HSM 322
Hours: 20
Credit: 02

Pre-requisite: Health Systems Management III

Module Competence

This module is designed to enable the learner develop competencies in entrepreneurship management.

Module Outcomes

By the end of this module the learner should:

1. Apply principles and concepts of medical entrepreneurship in dynamic health sector.
2. Develop a business plan

Module Units

Unit name	Hours	
	Theory	Practicals
Introduction to entrepreneurship	10	0
Business plan	8	2

Module Content

Introduction to entrepreneurship; definition, concepts, characteristics risk-taking, self-confidence, goal setting, drive and energy, types and their benefits, life cycle of a business, creation and starting of small businesses, buying an on-going small business. Evaluating an on-going small business; investor's perspective and entrepreneur's perspective. **Business plan;** executive summary, company description, Product/Services description, industry overview, market analysis, customers analysis, marketing and sales plans, development, operations, management, competitors analysis, policy development, staffing, advertising, personal selling, consumer credit, purchasing, inventory control and production processes, business development and expansion.

Code: CHE322
 Hours: 20
 Credit: 2

Pre-requisite(s): Community Health V

Module Competence

This module is designed to enable the learner acquire knowledge on applications of concepts of demography, OHS and skills to address drugs and substances abuse.

Module Outcomes

By the end of this module the learner should:

1. Apply concepts of demography in planning health services
2. Demonstrate knowledge in management, prevention and control of common occupational health conditions and hazards
3. Manage cases of drug and substances abuse in the community

Module Units

Unit name	Hours	
	Theory	Practical
1. Occupational health and safety	10	0
2. Demography	10	0
3. Drug and substance abuse	10	0

Module Content

Occupational Health and safety; Historical background, principles, of occupational classification of occupational hazards, control and prevention, occupation related diseases, Occupational Health and Safety Regulations. **Demography,** definition of terms, population pyramids, dependence ratio, world population trends, Kenya population trends, sources and uses of demographic data, census, types, limitations of census data, population measurements in health, migration, planning for health services. **Drugs and substances abuse;** definition, commonly abused drugs and substances, health effects, management, abuse of prescription drugs, alcohol control Act and NACADA Act.

Teaching Strategies; Lectures, Tutorials and Group Assignments.