Kenya Medical Training College. Department of Clinical Medicine
Course Outline for Diploma in Clinical Medicine &Surgery

Course Outline for Medicine I

Competence

To enable the learner apply the knowledge, skills and attitudes in the management of medical conditions.

Outcomes

1. Classify, diagnose and manage STIs
2. Demonstrate understanding of management of HIV/AIDS
3. Diagnose and manage tropical diseases
4. Manage Respiratory conditions
5. Manage Cardiovascular conditions

Module Units: STI, HIV, AIDS, Dermatology, Tropical Medicine, Respiratory Conditions, Cardiovascular Conditions.

Week	Unit
Week 1:	**STIs**; definitions, classification ,common features of STIs, syndrome management**,** , complications
Week 2:	**HIV/AIDS;** Epidemiology, lifecycle of HIV virus, classifications/staging, opportunistic infections
Week 3	management and HBC **Dermatology**; overview of the anatomy and physiology of the skin, History taking, physical examination,
Week 4	pharmacology of topical applications, leprosy, skin bacterial infections, fungal, viral, pediculosis, insect bites, tungiasis,
Week 5:	Scabies, albinism, Eczema, psoriasis, drug eruptions, vitiligo, acne vulgaris, carcinomas, ulcers**.**
Week 6:	**Tropical Medicine;** parasitic,(nematodes, cestodes, trematodes) protozoan, (malaria, trypanasomiasis, leishmaniasis, amoebiasis, giardiasis),
Week 7:	bacterial, (brucellosis, shigellosis, salmonellosis, anthrax, leptospirosis), fungal (candidiasis, cryptococcosis, blastomycosis, histoplasmosis)
Week 8:	viral, (haemorrhagic fevers, cytomegalovirus, infectious mononucleosis),**Respiratory conditions,** overview of anatomy and physiology, history taking, physical examination,
Week 9:	**CATs,**
Week 10:	Features of upper respiratory diseases, investigation, treatment and complications of respiratory diseases.
Week 11	Features of lower respiratory diseases, investigation, treatment and complications of respiratory diseases.
Week 12:	**Cardiovascular conditions,** overview of anatomy and physiology,
Week 13:	history taking, physical examination, features of cardiovascular diseases
Week 14:	features of cardiovascular diseases, investigations, treatment and complications of cardiovascular diseases
Week 15:	features of cardiovascular diseases, investigations, treatment and complications of cardiovascular diseases
Week 16:	features of cardiovascular diseases, investigations, treatment and complications of cardiovascular diseases
Week 17:	Revision/study week
Week 18:	**End of Semester Examinations**

Module Content

STIs; definitions, classification ,common features of STIs, syndromic management**,** , complications **HIV/AIDS;** Epidemiology, lifecycle of hiv virus, classifications/staging, opportunistic infections, management and HBC **Dermatology**; overview of the anatomy and physiology of the skin, History taking, physical examination, pharmacology of topical applications, leprosy, skin bacterial infections, fungal, viral, pediculosis, insect bites, tungiasis, scabies, albinism, Eczema, psoriasis, drug eruptions, vitiligo, acne vulgaris, carcinomas, ulcers**. Tropical Medicine;** parasitic,(nematodes, cestodes, trematodes) protozoan, (malaria, trypanasomiasis, leishmaniasis, amoebiasis, giardiasis), bacterial, (brucellosis, shigellosis, salmonellosis, anthrax, leptospirosis), fungal (candidiasis, cryptococcosis, blastomycosis, histoplasmosis) viral, (haemorrhagic fevers, cytomegalovirus, infectious mononucleosis),**Respiratory conditions,** overview of anatomy and physiology, history taking, physical examination, features of respiratory diseases, investigation, treatment and complications of respiratory diseases.

Cardiovascular conditions, overview of anatomy and physiology, history taking, physical examination, features of cardiovascular diseases, investigations, treatment and complications of cardiovascular diseases**.**

Kenya Medical Training College. Department of Clinical Medicine
Course Outline for Diploma in Clinical Medicine &Surgery

Course Outline for Clinical Pathology I

Code: **CLP 213**

Competence

To enable the learner demonstrate the understanding of pathological processes to the clinical features of diseases.

Outcomes

1. Explain the pathogenesis and pathology of the disorders of the cardiovascular system.
2. Explain the pathogenesis and pathology of the disorders of the respiratory system.

Content Delivery

Week	Dates		Unit
	From	To	
Week 1:			Review of anatomy and physiology, cardiac failure,
Week 2:			Cardiomyopathies, myocarditis and pericarditis
Week 3			Rheumatic fever and rheumatic heart disease,
Week 4			Valvular heart disease and infective endocarditis
Week 5:			Disorders of arteries, hypertension, disorders of veins and lymphatics
Week 6:			Review anatomy and physiology. Disorders of upper respiratory tract –rhinitis, sinusitis,
Week 7:			Disorders of upper respiratory tract – laryngitis, diphtheria, tonsillitis, epiglottitis
Week 8:			Disorders of the lower respiratory tract – bronchitis. lung congestion, pulmonary
Week 9:			**CATs,**
Week 10:			Pneumonia, lung abscess, bronchiectasis
Week 11			Bronchial asthma, empyema, hydrothorax,
Week 12:			Pulmonary atelectasis, lung collapse, emphysema
Week 13:			asphyxia, pulmonary tuberculosis and lung carcinoma
Week 14:			
Week 15:			Make up lessons
Week 16:			
Week 17:			Study week
Week 18:			**End of Semester Examinations**

Module Content

Cardiovascular system; review of anatomy and physiology, cardiac failure, cardiomyopathies, myocarditis and pericarditis, rheumatic fever and rheumatic heart disease, valvular heart disease and infective endocarditis, disorders of arteries, hypertension, disorders of veins and lymphatics.
Respiratory system; review anatomy and physiology. Disorders of upper respiratory tract – rhinitis, sinusitis, laryngitis, diphtheria, tonsillitis, epiglottitis, Disorders of the lower respiratory tract – bronchitis. lung congestion, pulmonary oedema, pneumonia, lung abscess, bronchiectasis, broncho asthma, empyema, hydrothorax, pneumothorax, pulmonary atelectasis, lung collapse, emphysema, asphyxia, pulmonary tuberculosis and lung carcinoma.

Kenya Medical Training College. Department of Clinical Medicine
Course Outline for Diploma in Clinical Medicine &Surgery

Course Outline for Reproductive Health I (Gynaecology)

Code: GYN 104

Competence

Enable the learner assess, diagnose and manage patients with gynaecological conditions.

Module Outcomes

By the end of this module the learner should;

1. Demonstrate the understanding of concepts and principles of clinical methods in gynecology
2. Recognize and manage disorders of Puberty, Menstruation, Menopause and Andropause
3. Demonstrate understanding of Human Sexuality
4. Identify and manage patients with Infertility
5. Explain Adolescence and Youth Health in relation to Reproductive function
6. Evaluate and manage patients with early pregnancy complications

Week	Unit Name	Topic
1	Clinical Methods	Gynaecological history, physical examination and investigations in a gynaecological patient, Skills lab demonstration
2	Puberty,Menstruation, Menopause and Andropause	Puberty, Menstrual Cycle, Menopause, Andropause
3	Human Sexuality and its Disorders	Sexual orientation and Deviations, Normal sexual response, Disorders of sexuality
4	Infertility	Introduction – definition, normal fertility, types of infertility; general factors influencing fertility, Causes of infertility, Management of infertility. Assisted reproductive technologies,
5	Adolescence and Youth Health	Introduction - definitions, changes that occur during adolescence Common medical conditions affecting adolescents and youths Harmful practices affecting Adolescents and Youths Peer education and counselling, Youth friendly services
6	Early Pregnancy Complications	Abortion, Ectopic pregnancy, Molar pregnancy, Gestational trophoblastic disease, Hyperemesis gravidarum
	End of Semester Exams	

Module content

Clinical Methods; gynecological history, physical examination in a gynecological patient, gynecological investigations. **Puberty, Menstruation, Menopause and Andropause;** normal pubertal changes, disorders of puberty, physiology of menstruation, menstrual disorders, management of menstrual disorders. Menopausal changes, manifestations of andropause, management of menopausal and andropausal disorders. **Human Sexuality and its Disorders:** sexual orientation, normal sexual response, disorders of sexuality, management of sexuality disorders, Sexual deviations. **Infertility;** introduction – definition, normal fertility, types of infertility; causes of infertility; management of infertility. Assisted reproductive technologies **Adolescents' and Youth Health:** definitions, changes that occur during adolescence, common conditions affecting adolescents and youths, harmful practices, peer education and counseling, youth friendly services. **Early Pregnancy complications;** abortion, ectopic pregnancy, molar pregnancy and gestational trophoblastic disease, hyperemesis gravidarum.

Kenya Medical Training College. Department of Clinical Medicine &Surgery

Course Outline for Surgery I

Code: Sur216

Module Outcomes

1. Explain the concepts and principles of surgery
2. Explain the concepts and principles of orthopedics and Traumatology
3. Attend pre and post-operative patients
4. Manage soft tissue conditions
5. Diagnose and manage chest conditions appropriately.

Content Delivery

Week	Dates		
	From	To	
Week 1:	Introduction to surgery		Definition, types surgery (general, orthopaedic, traumatology, cardiothoracic etc), terminologies.
Week 2:			clerkship(history and examination, imaging and other investigations, treatment of general surgery conditions)
Week 3			metabolic response to injury(basic concepts in homeostasis, metabolic stress response to surgery and trauma classification of surgical conditions, medical conditions that affect surgical treatment
Week 4	Introduction to orthopaedics		**;** diagnosis and management of orthopaedic disorders (history and examination, imaging and other investigations, treatment of orthopaedic disorders), pathology of fractures and fracture healing, principles of fracture management
Week 5:			types of anaesthesia (regional, local and general), care of the airway
Week 6:	Pre – and post-operative surgical care.		pre and post-operative care of surgical patient(specific preoperative problems, care in operating room, common and serious post-operative complications),.
Week 7:			
Week 8:	Pre – and post-operative surgical care.		types of anaesthesia (regional, local and general), care of the airway
Week 9:			C.A.TS
Week 10:	Soft tissue conditions.		burns(pathophysiology of burn injury, airway and lungs, life threatening events with major burns, care of burnt patient, complication of burns), soft tissue infections, soft tissue injuries, ulcers, gangrene
Week 11			burns(pathophysiology of burn injury, airway and lungs, life threatening events with major burns, care of burnt patient, complication of burns), soft tissue infections, soft tissue injuries, ulcers, gangrene
Week 12:	Chest conditions		Obstruction of the airway, chest injuries: fracture ribs, flail chest, pneumothorax, cardiac tamponade, haemothorax, surgical emphysema, empyema, lung tumours, and breast conditions.
Week 13			Obstruction of the airway, chest injuries: fracture ribs, flail chest, pneumothorax, cardiac tamponade, haemothorax, surgical emphysema, empyema, lung tumours, and breast conditions.
Week 14:			Study week
Week 18:			**End of Semester Examinations**

Module Content

Introduction to surgery; definition, types surgery(general,orthopaedic,traumatology,cardiothoracic etc…),terminologies, clerkship(history and examination, imaging and other investigations, treatment of general surgery conditions),metabolic response to injury(basic concepts in homeostasis, metabolic stress response to surgery and trauma), classification of surgical conditions, medical conditions that affect surgical treatment. **Introduction to Orthopaedics and Traumatology;** diagnosis and management of orthopaedic disorders (history and examination, imaging and other investigations, treatment of orthopaedic disorders), pathology of fractures and fracture healing, principles of fracture management, complications of fractures, special features of fractures in children, joint injuries(dislocations, sublaxations, anterior articular fractures). **Pre and Post-operative Surgical Care;** pre and post-operative care of surgical patient(specific preoperativeproblems,care in operating room, common and serious post-operative complications), types of anaesthesia (regional, local and general), care of the airway. **Soft Tissue Conditions;** burns(pathophysiology ofburninjury,airway and lungs,life threatening events with major burns,care of burnt patient,complication of burns), soft tissue infections, soft tissue injuries, ulcers, gangrene. **Chest Conditions;** obstruction of the airway, chest injuries: fracture ribs, flail chest, pneumothorax, cardiac tamponade, haemothorax, surgical emphysema, empyema, lung tumours, and breast conditions.

KMTC. Clinical Medicine & Surgery

Course Outline for Paediatrics and Child Health I

Code: **PCH 216**

Outcomes

1. Diagnose and manage neonatal conditions
2. Apply principles of growth and development in diagnosis and management of childhood illnesses and conditions.
3. Diagnose and Manage Malnutrition and nutritional disorders.
4. Carry out immunization and manage Immunizable Diseases.
5. Manage emerging and re-emerging paediatric tropical diseases and HIV.
5. Apply the principles of IMNCI and ETAT plus in the management of common childhood illnesses.
6. Diagnose and manage respiratory conditions and diseases.

Week	Dates		Unit
	From	To	
Week 1:			**Introduction to paediatrics and Neonatology.** definitions and terminologies, concepts and principles of pediatrics, comprehensive pediatric history;
Week 2			**Essential newborn care:** newborn examination, assessment APGAR score, birth asphyxia and Active resuscitation of the newborn
Week 3			**Birth injuries**;cephalo-haematoma, caput sussedeneum, brachial plexus palsies, fracture clavicle, cephalohaematoma. **Congenital disorders** and abnormalities,(club foot CTEV, Spina bifida, imperforate anus/ vagina cleft lip and palate, ambiqous genitalia. premature neonate, SGA and LGA Anemia, jaundice; ABO and rhesus incompatibility
Week 4			Hemorrhagic diseases of the newborn. congenitalinfections; Syphilis, rubella, herpes, toxoplasmosis, CMV Neonatal sepsis. Neonatal convulsions, Perinatal mortality.
Week 5:			**Growth and development** Growth monitoring, Anthropometric measurements Factors influencing, Milestones
Week 6:			**Infant feeding** Types of infant feeding
Week 7:			**Nutritional disorders** Micronutrient deficiencies. Malnutrition; WHO Classification Rickets.
Week 8:			Immunization , EPI schedule
Week 9:			**CATs,**
Week 10:			**Immunizable diseases**
Week 11			Measles
Week 12:			**Tropical diseases** Aetiology, lifecycle, transmission, pathophysiology, presentation, investigations, treatment and control
Week 13:			HIVLife cycle, WHO staging and, Management of HIV /aids opportunistic infections.
Week 14:			**IMNCI** Classifications treatment and follow up care for child and young infant
Week 15:			Emergency Triage Assessment and Treatment
Week 16:			**Respiratory diseases** Anatomy and physiology of R/S Congenital defects, etiology, pathophysiology, presentation, differential, diagnosis, complications, management, prognosis and prevention, Coryza, foreign body, epiglottitis, Laryngo-tracheal (LTB) bronchitis, bronchiolitis, bronchiolitis, Bronchial Asthma, pneumonia.
Week 17:			Study week
Week 18:			**End of Semester Examinations**

Introduction to Pediatrics and Neonatology -Definitions and terminologies, concepts and principles of pediatrics, comprehensive Paediatric history; **Essential newborn care**; Normal newborn examination, assessment of the newborn, APGAR score, birth asphyxia and anoxia, Active resuscitation and care. **Birth injuries**, congenital disorders and abnormalities, premature neonate, SGA and LGA Anemia, jaundice; ABO and rhesus incompatibility and hemorrhagic diseases of the newborn. Congenital Infections; Syphilis, rubella, herpes, toxoplasmosis, CMV Neonatal sepsis, Neonatal convulsions, Perinatal mortality.**Growth and Development** - Growth monitoring, Factors influencing growth and development, developmental milestones.**Infant feeding and Nutritional disorders** - Breast feeding, Weaning and Artificial feeds. Micronutrient deficiencies.**Malnutrition**; WHO Classification of malnutrition; SAM; MAM and Rickets.**Immunization, Immunizable and Tropical diseases** - Vaccines, DVI (KEPI), National Immunization Schedule; Immunizable diseases: Etiology, pathophysiology, presentation, investigation, treatment, complications and prevention. Tropical diseases: aetiology, lifecycle, transmission, pathophysiology, presentation, investigations, treatment and control, WHO staging and, Management of HIV /aids opportunistic infections.**Kenya essential package of health** - IMNCI, ETAT plus WHO GUIDELINES: Concept of IMNCI, common childhood illnesses, Classification of sick children, Emergency Triage Assessment and Treatment of sick children. **Respiratory Diseases and Conditions** - Overview of Anatomy and physiology of the respiratory system; Congenital defects of respiratory system: etiology, pathophysiology, presentation, differential diagnosis, complications, management, prognosis and prevention, ENT: Coryza, foreign body, epiglottitis, Laryngo-tracheal bronchitis, bronchiolitis, bronchiolitis, Bronchial Asthma, pneumonia, pleural effusion, lung abscess.

Compiled by: John Ochieng'(0711832072)', KMTC-Kisumu Campus .2020 Class

Kenya Medical Training College. Department of Clinical Medicine & Surgery

Course Outline for Pharmacology and Therapeutics III

Code: PTH 213

Outcomes

1. Demonstrate understanding of autacoids and their uses
2. Prescribe the various drugs for digestive system diseases effectively
3. Manage respiratory system conditions appropriately with drugs

Week	Dates		Unit
	From	**To**	
Week 1:			**Autacoids;** definition, actions of autacoids, classification of autacoids, amine autacoids (histamine, 5-Hydroxytryptamine/serotonin)
Week 2:			Lipid-derived autacoids; eicosanoids (prostaglandins, leukotrienes), platelet activating factor
Week 3			Peptide autacoids; bradykinins, angiotensin.
Week 4			**Drugs Acting on the Digestive System;** classification, drugs used in peptic ulcer disease (antacids, H2 receptor antagonists, proton pump inhibitors, prostaglandin analogues, selective antimuscarinic chelate complexes),
Week 5:			**Drugs Acting on the Digestive System;** antispasmodics and drugs affecting gut motility
Week 6:			**Drugs Acting on the Digestive System;** emetics, anti-emetics.
Week 7:			**Drugs Acting on the Digestive System;** antidiarrheal drugs
Week 8:			**Drugs Acting on the Digestive System;** laxatives and bowel cleansing solutions, local preparations (anal and rectal preparations)
Week 9:			**CATs**
Week 10:			**Drugs Acting on the Digestive System;** nutrients preparations (IV fluids and feeds, vitamins).
Week 11			**Drugs Acting on the Respiratory System;** classification, preparations for cough (suppressants, expectorants, mucolytic)
Week 12:			Drugs for bronchial asthma; bronchodilators (α- and β-adrenoreceptors, selective β_2 stimulants)
Week 13:			Compound bronchodilator preparations
Week 14:			Drugs for bronchial asthma; corticosteroids and mast cell stabilizers, inhaler devices and nebulizers
Week 15:			Pulmonary surfactants and oxygen
Week 16:			Antihistamines (sedating and non-sedating), anti-allergic drugs.
Week 17:			Study Week
Week 18:			**End of Semester Examinations**

Module Content

Autacoids; definition, actions of autacoids, classification of autacoids, amine autacoids, lipid-derived autacoids, peptide autacoids, cytokines, eicosanoids, bradykinins. **Drugs Acting on the Digestive System;** classification, drugs used in peptic ulcer disease (antacids, H2 receptor antagonists, proton pump inhibitors, prostaglandin analogues, selective antimuscarinic chelate complexes),antispasmodics and drugs affecting gut motility, antidiarrheal drugs, laxatives and bowel cleansing solutions, nutrients preparations (IV fluids and feeds, vitamins),local preparations (anal and rectal preparations), emetics, anti-emetics. **Drugs Acting on the Respiratory System;** classification, preparations for cough (suppressants, expectorants, mucolytic), drugs for bronchial asthma (bronchodilators (α- and β-adrenoreceptors, selective β_2 stimulants, compound bronchodilator preparations), corticosteroids and mast cell stabilizers; inhaler devices and nebulizers), pulmonary surfactants and oxygen, antihistamines (sedating and non-sedating), anti-allergic drugs.

Kenya Medical Training College. Department of Clinical Medicine
Course Outline for Diploma in Clinical Medicine &Surgery

Course Outline for Health Statistics

Code: HST 213

Module Outcomes

By the end of this module the learner should:

1. Demonstrate understanding of the history and application of statistics in health care
2. Apply measures of central tendency in data analysis
3. Apply measures of dispersion in data analysis
4. Categorize data effectively
5. Apply various approaches in data analysis and presentation

Content Delivery

Week	Dates		Unit
	From	To	
Week 1:			Introduction to statistics; Definitions, history, characteristics of the various statistics, types, application of statistics,
Week 2:			Scales of Measurement, Nominal, ordinal, interval, ratio, scale
Week 3			Measures of Central Tendency; Calculation, interpretation, grouped data, ungrouped data, mode, median, and mean
Week 4			Measures of dispersion; range, inter-quartile range, semi inter-quartile range
Week 5:			Standard deviation, variance, Percentiles, Skewness.
Week 6:			Statistical Data; Primary and secondary, Numerical and categorical,
Week 7:			Grouped and ungrouped, Vital statistics, Calculation of demographic rates.
Week 8:			
Week 9:			**CATs,**
Week 10:			Data analysis and presentation; Introduction to data analysis, interpretation and presentation.
Week 17:			Study week
Week 18:			**End of Semester Examinations**

Module Content

Introduction to statistics; Definitions, history, characteristics of the various statistics, types, application of statistics, Scales of Measurement, Nominal, ordinal, interval, ratio, scale. **Measures of Central Tendency;** Calculation, interpretation, grouped data, ungrouped data, mode, median, and mean. **Measures of dispersion;** range, inter-quartile range, semi inter-quartile range, Standard deviation, variance, Percentiles, Skewness.**Statistical Data;** Primary and secondary, Numerical and categorical, Grouped and ungrouped, Vital statistics, Calculation of demographic rates. **Data analysis and presentation;** Introduction to data analysis, interpretation and presentation.