

B.Sc. PHYSICIAN ASSISTANCE

R2019

CURRICULUM

UAH19CT101	ANATOMY
	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Anatomy
OBJECTIVES	An outline of anatomy with special emphasis on applied aspects is provided to the students for better understanding of the technical and diagnostic procedure.

UNIT I: Organization of the human body

1. Introduction

- Introduction to human body
- Definition and subdivision of anatomy
- Anatomical position and terminology
- Region and systems of the body
- Cavities of the body and their contents
- Levels of organization of the body

2. Cell and genetics

- Parts of cell – cell membrane, cytoplasm, organelles, inclusion bodies, nucleus
- Structure of chromosome, DNA, RNA.
- Basics & fundamentals of Genetics, Karyotyping, Chromosomal disorders, prenatal diagnosis, genetic counseling and gene therapy.
- Cell division – Definition and main events that occur in different stages of mitosis and meiosis.
- Tissues – Definition, characteristic features and types with example.
- Types of glands with example

UNIT II: Systems of support and movement

1. Skeletal system

- Cartilage: Type and basic histological feature.

- Bones: definition, classification based on location, name and number of bones with general features of important bones, function of bone, histological feature of a compact bone.
- Joints – Definition and types with example, Axis and movements. Shoulder, elbow, hip, knee joints – type, bones and ligaments involved, possible movements.

1. Muscular system

- Types of muscle with basic histological features
- Parts of skeletal muscle.
- Definition of origin and insertion
- Origin, insertion, nerve supply, action of sternocleidomastoid, pectoralis major, deltoid, gluteus maximus and diaphragm.

UNIT III: Controls systems of the body

1. Nervous system

- Subdivisions of the nervous system
- Spinal cord-location, extent, external features and blood supply
- Brain-subdivision, location, external features of Medulla oblongata, Pons, Midbrain, Cerebellum, and Cerebrum, Thalamus and Hypothalamus, Location and subdivision of ventricles of brain. Circle of Willis.
- Cranial nerves-name, number, attachment, area of distribution
- Spinal nerves-typical spinal nerves. Name and location of plexuses. Location and distribution of brachial and lumbosacral plexus.
- Autonomic nervous system-sympathetic and parasympathetic nervous system. Location of preganglionic and postganglionic neurons.

2. Sense organs

- Location and features of nose, tongue, eye, ear and skin.

3. Endocrine system

- Names of the endocrine glands. Location and features of pituitary, thyroid, parathyroid, suprarenal, pancreas, ovaries and testes. Names of hormones produced by each gland.
- Microscopic features of thyroid and pancreas.

UNIT IV: Maintenance of the human body

1. Cardiovascular system

- Types and general features of blood vessels. Structure and types of arteries and veins. Shape, size, location, covering, external and internal features of Heart. Conducting system of heart. Blood supply of the heart. Name, location, branches and main distribution of principal arteries and veins

2. Lymphatic system

- General features of Lymph nodes and lymphatic vessels. Name, location, external features, microscopic features of tonsil and spleen.

3. Respiratory system

Name the organs of respiration. Location and features of Nasal cavity, pharynx, larynx, trachea, lung & pleura.

Mention the microscopic feature of the lung.

4. Digestive system

- Name the parts of the alimentary canal and accessory organs. Location & features of esophagus, stomach, small and large intestine. Location and feature of tongue, salivary glands, pancreas, liver and gallbladder. Microscopic features of the liver.

5. Urinary system

- Names of urinary organs. Location and features of kidney, ureter, urinary bladder & urethra. Microscopic features of the kidney.

6. Reproductive system

- Names of male and female organs of reproduction. Location and features of testis, epididymis, vas deferens, prostate gland and spermatic cord. Location & features of uterus, uterine tube, ovary and breast.

7. Embryology

- Structure of gametes & gametogenesis. Fertilization to development of embryo till 3rd week. Derivatives of germ layers. Teratogens, Structure and Functions of placenta.

UNIT V: Anatomical regions

- Simple ideas about scalp, triangles of neck, axilla, cubital fossa, carpal tunnel, mediastinum, umbilicus, inguinal canal, femoral triangle
- sub sartorial canal popliteal fossa

PRACTICALS/DEMONSTRATIONS

1. Demonstrations of dissected specimens.
2. Viewing of projection of microscopic slides of muscle, bone, cartilage, spleen, tonsil, lung, liver, kidney, thyroid and pancreas

REFERENCE BOOKS

1. Manipal manual for AHS by Dr. Sampath Madhyastha, (Second Edition) Published by CBS Publishers.
2. Handbook of anatomy for nurses by Dr. P. Saraswathi
3. Ross and Wilson, Anatomy and physiology in health & illness

COURSE OUTCOMES	
CO1	The student will be able to gain knowledge of general anatomy and locomotion.
CO2	The student will be able to gain knowledge of basic human anatomy and histology of CVS and Respiratory systems.
CO3	The student will be able to gain knowledge of basic human anatomy and histology of CNS, GI, excretory and reproductive systems.
CO4	The student will be able to gain of knowledge basic human anatomy and histology of endocrine system and special senses.
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES	

COs\POs	a	b	c	d	e	f
1	S					
2		M				
3			S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

	PHYSIOLOGY
UAH19CT102	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Physiology
OBJECTIVES	To know the basic functioning of the human body, and the various organ systems.

Unit-I

1. General Physiology:

- Concept of Homeostasis
- Cell structure and functions
- Transport across membranes

Body and body fluids:

- Body fluid volumes, compartments and composition
- Blood composition and functions
- Plasma proteins – Types and functions
- Erythrocytes – functions, Erythropoiesis, anemia's
- Leucocytes – classification and functions
- Platelets – morphology and functions
- Blood coagulation – Mechanism and name of anticoagulants
- Blood groups – Basis of ABO & Rh grouping, Erythroblastosis Foetalis

2. Muscle physiology:

- Muscles – Classification & structure of striated, nonstriated & cardiac muscle
- Neuromuscular junction
- Mechanism of skeletal muscle contraction

3. Digestive system:

- Salivary glands, functions of saliva
- Parts of stomach, composition & functions of gastric juice
- Pancreatic Juice – composition & functions
- Bile – composition & functions of bile & bile salts
- Functions of Small intestine & large intestine

Unit-II

1. Skin

- Structure & Functions

2. Excretory system:

- Kidney: Basic physiological anatomy (Including JGA)
- Formation of urine – GFR
- Formation of urine – Reabsorption & secretion
- Micturition Reflex

- Dialysis – Principle, types
- Renal function tests

Unit-III

1. Endocrine system:

- Hypothalamo hypophyseal inter relationship
- Posterior pituitary hormones and its actions
- Anterior pituitary hormones, Growth hormone – Actions
- Dwarfism, gigantism, acromegaly
- Thyroid hormones – Actions
- Cretinism, Myxoedema, Grave's disease (clinical features)
- Parathyroid hormones – Functions, Tetany
- Insulin, Glucagon's – Actions, Diabetes mellitus
- Adrenal medullary hormones & their actions
- Adrenal cortex hormones & their actions

2. Reproductive system:

- Male reproductive organs – Spermatogenesis, Testosterone actions
- Female reproductive organs – menstrual cycle (endometrial and ovarian cycles) and its hormonal control
- Contraceptive methods in male and female

Unit-IV

1. Respiratory system:

- Basic physiological anatomy
- Surfactant
- Mechanics of respiration
- Lung volumes and capacities
- Oxygen transport, Carbon-di-oxide transport
- Nervous and chemical regulation
- Pulmonary function tests.

2. Cardiovascular system:

- Basic physiological anatomy, innervations of heart
- ECG – normal waves, intervals and their significance
- Cardiac cycle – mechanical events, Heart sounds
- Blood pressure – Definition, measurement, normal values, factors maintaining BP Regulation

Unit-V

1. Nervous system:

- Structure of neuron, neuroglial cells, synapse and transmission across it
- Reflex – Components of reflex arc, examples.

- Functions of ascending tracts – anterior, lateral spinothalamic tracts, Dorsal column
- Functions of Corticospinal (Pyramidal) tract-Descending tract
- Functional areas of cerebral cortex
- Functions of basal ganglia, thalamus, hypothalamus, limbic system and cerebellum

2. Special senses:

- Receptors for various special senses

Practical Demonstration

Hematology:

1. Enumeration of RBC count.
2. Enumeration of WBC count.
3. Differential Count.
4. Estimation of Hemoglobin.
5. Determination of blood group.
6. Determination of bleeding time and clotting time.

Clinical physiology:

1. Measurement of blood pressure.
2. Determination of Radial pulse

Reference Book

1. Human Physiology for BDS by A.K.Jain, 4th Edition, Avichal publishing co

COURSE OUTCOMES	
CO1	The student will be able to gain knowledge of general physiology, nerve-muscle physiology and haematology.
CO2	The student will be able to gain knowledge of basic human physiology with respect to CVS, Respiratory system and GI system.
CO3	The student will be able to gain knowledge of basic human physiology of excretion and CNS.
CO4	The student will be able to gain knowledge of basic human physiology of special senses and endocrine system.

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S					

2		M				
3			S			
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Category	Basic Medical Science					
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	BIOCHEMISTRY
UAH19CT103	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Biochemistry
OBJECTIVES	To know the basic Biochemical reactions within the human body, and the various organ systems.

UNIT I – Cell and its molecules

Cell – Cell organelles, Fluid Mosaic Model, functions of cell membrane, Brief description of transport across the cell membrane.

Carbohydrates – Definition, Classification with examples, Sources, physiological significance and HbA1c.

Lipids – Definition, Classification with examples, Sources, Types of lipids present in the body, storage form, storage site, free cholesterol structure, functions of lipids, lipoprotein structure and its functions.

Nucleic acids – Nucleotide, Nucleoside, types of nucleic acids, secondary structure of DNA & Its functions; Types of RNA & its functions.

UNIT II – Proteins and Enzymes

Proteins – Definition, Classification, functions of proteins, Plasma proteins; Classification of Amino acids with examples

Hemoglobin structure, Functions of hemoglobin, hemoglobin derivatives, abnormal hemoglobin

Enzymes: Definition, Classification, coenzymes, Metalloenzymes, Factors affecting enzyme activity, Regulation of enzymes, overview of Mechanism of enzyme action, Isoenzymes and Clinical importance of enzymes

UNIT III-Vitamins, Minerals, Nutrition

Vitamins: Definition, Classification of Vitamins

Sources, RDA, Function & Deficiency symptoms of

- Fat Soluble Vitamins (A, D, E & K);
- Water Soluble Vitamins (Thiamine, Riboflavin, Niacin, Biotin, Pantothenic acid, Pyridoxine, Folic acid, Cobalamin) and Vitamin C

Minerals: Definition, Classification of Minerals

Sources, RDA, Function, Reference levels & Deficiency Symptoms of

- Calcium, Phosphorus, Iron Copper, Zinc, Sodium, Chloride, Iodine, Potassium, Fluorine and Selenium.

Nutrition: BMR, SDA, Dietary fibres, protein Energy Malnutrition and Obesity 24

UNIT IV – Bioenergetics and Metabolism

Bioenergetics: Electron Transport chain and Oxidative Phosphorylation

Metabolism

Carbohydrates: Digestion and absorption, Glycolysis, TCA cycle, Metabolism of Fructose and Galactose.

Lipids: Digestion and absorption, Beta oxidation of fatty acids, Regulation of Cholesterol level in the cell and outline of lipid transport.

Proteins: Digestion and Absorption, Formation and Disposal of Ammonia, Urea Cycle, Special Products of Glycine, Tyrosine and Tryptophan.

UNIT V – Miscellaneous

Outlines of DNA organization, Replication, Transcription, Genetic code and Translation

Organ function Tests: Liver, Renal and Bone.

PRACTICAL

- Spotters

COURSE OUTCOMES						
CO1	The student will be able to gain knowledge of biochemistry of cell structure, functions, digestion, enzymes and proteins.					
CO2	The student will be able to gain knowledge of biochemistry of carbohydrates, minerals and vitamins					
CO3	The student will be able to gain knowledge of liver and renal function tests, specialized laboratory investigations and lipids.					
CO4	The student will be able to gain knowledge of biochemistry of metabolism, homeostasis, nucleic acids and cancer					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S				s	
2		M		s		
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CT104	BASICS IN MEDICAL PHYSICS AND ELECTRONICS
	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Radiology
OBJECTIVES	To know the basics in Medical Physics, Bio electric potential and the functioning of Medical equipment.

Unit I: Laser

Nature of Light-Reflection-Refraction-Total internal reflection-Optical fibers-Applications in Medicine – Laser-Principles-Action-Types of laser, Basic principles of laser in Medical Application – Argon-Ion laser photocoagulator-Photo thermal-Photochemical application-Applications of laser in Medicine-Laser hazards and safety measures.

Unit II: Radiation Physics

Introduction to nuclear physics and radioactivity, Radioactive radiations – X-ray, production of x-ray, Properties of x-ray radiations – Biological effects of radiation, Radiation damage in matter, Radiation protection principles, radiation detection and measurement – Ultrasound and generation of ultrasound.

Unit III: Introduction to Imaging Technique

Principles of Microscope: Simple microscope and compound microscope-Radiography: Making and X-ray image-Fluoroscopy. CT Scans, MRI – Ultrasonography: Ultrasound picture of Body-A-Scan-M-Scan-Ultrasound diathermy-Phonocardiography – Radio isotopes: Uses of Radio isotopes – ^{99m}Tc Generator – Scintillation detectors – Application of scintillation detectors – Gamma Camera – Positron Camera

Unit IV: Semiconductor devices

Principles of diodes and Transistors – Integrated circuits – Amplifiers – Basic configuration and types – differential and operational amplifiers – Waveform generators – Timer – A/D and D/A converters – Active filters – Transducers – Basic configuration and types.

Unit V: Bio potential Recording Systems

Introduction to bioelectric potential – Electrodes and surfaces – Bio potential amplifier – Frequency ranges of various biopotential signals – Working principles of bio potential recording systems – Electrocardiography – Electroencephalograph –Electromyography.

Reference Books:

1. New Understanding physics for advanced level – Jim Breithaupt.
2. Advanced Physics for you by Keith Johnson, Simmons Hewett, Sue holt, John miller
3. Christensen's Physics of diagnostic Radiology by Thomas S. Curry III, M.D., Robert C Murry, Jr. PhD, Dow Dey, PhD.
4. Applied Electronics, A. Subramanyam, The National Publishing co., Madras (1996).
5. Design and Development of Medical Electronic Instrumentation, David Prutchi and Michael Norris, John Wiley & Sons (2005).

COURSE OUTCOMES

CO1	The student will be able to know the functioning of radiological devices
CO2	The student will be able to understand the mechanism of functioning of medical equipment
CO3	The student will be able to know the functioning of Lab instruments
CO4	The student will be able to understand the functioning of radiation devices

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES

COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CT105	ENGLISH
	Total Contact Periods – 60
	Total credits -4
	Course Designed by – Department of English
OBJECTIVES	To enable students to enhance their ability to comprehend spoken and written English required for effective communication in their professional work. Students will practice their skills in verbal and written.

Unit I: Spoken Communication

Learning to read the phonetic symbols
 Stress
 Intonation
 Rhythm
 Commonly mispronounced words
 Correct pronunciation of important commonly used
 Words in hospital practice

Unit II: Vocabulary and Reading

Special features of English vocabulary
 Common errors in choice of word
 Semi technical vocabulary
 Collecting material from library on scientific topics
 Comprehensive exercises

Unit III: Writing

Writing letters regarding permission, leave, opening bank account etc.
 Taking notes from lecture / reading materials
 Writing reports on patient care
 Summarizing scientific passages

Unit IV: Grammatical and Idiomatic Usage

Correction of errors
 Types of interrogative sentences
 Active-Passive voice
 Tense
 Principles of procession, clarity and specificity

Reference Books:

1. Effective English Communication by Krishna Mohan and Meenakshi Raman, Tata McGraw-Hill publishing Company Limited, New Delhi. (Approx. Cost Rs.200.
2. English for colleges and competitive Exams by Dr. R. Dyvadatham, Emerald Publishers (Approx. cost Rs. 150)

COURSE OUTCOMES

CO1	The student will be able to develop their intellectual, personal and professional abilities.
CO2	The student will be able to acquire basic language skills, listening, speaking, reading and writing.
CO3	The student will be able to acquire the linguistic competence necessarily required in various life situations
CO4	The student will be able to communicate with speakers of English language

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES

COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Language					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CT106	BASIC OF COMPUTERS
	Total Contact Periods – 30
	Total credits -4
	Course Designed by – Department of English
OBJECTIVES	This course is designed for students to develop basic understanding of used of computer and its applications in Clinical Departments

UNIT I: INTRODUCTION

Computer basics – Types of computers – hardware components – input devices – output devices – storage devices – memory – units and sizes – factors affecting performance – operating systems – applications software – networking – LAN and WAN – Accessories – backup – computer virus – software copyright.

UNIT II: WORD PROCESSING

Windows – Office automation – WORD processor – open a new document – toolbars – menus – font dialog box – enter text – scroll – spelling checker – Autocorrect – undo and redo – bullets and numbered lists – indenting – moving and copying – find and replace – auto shapes – saving document – preview and print.

UNIT III: ELECTRONIC SPREADSHEET AND DATA PRESENTATION

EXCEL spreadsheet – grid of rows and columns – active cell – selecting range – entering data – editing data – row and column labels – adjusting width – creating and copying formulae – relative – logical functions – lookup function – creating chart – bar chart – pit chart – print and save.

POWERPOINT presentation – creating slideshows- building outline – switching levels in outline – adding pictures – slide designs – design templates – formatting – color scheme – customized backgrounds – inserting content – hyperlink – revolution in education.

UNIT IV: DATABASE MANAGEMENT SYSTEM

ACCESS database – concept – template –primary key – records and fields – Student roster database – input mask – adding records – viewing data – updating entries – searching and querying – sorting – Table, forms and reports.

UNIT V: APPLICATIONS IN HEALTHCARE AND MEDICINE

INTERNET – e-governance – access to information – communication facility – mechanics of E-mail – social transformation – electronic billing – drug information –information flow in lab and radiology – storage of medical records – networking the organization – patient care – intelligent monitoring – scholarly information – health informatics – robotic assisted surgery – Clinical decision support systems – Telemedicine.

COURSE OUTCOMES

CO1	The student will be able to develop basic under-standing of computer use.
CO2	The student will be able to acquire knowledge on Applications of computers in clinical departments.
CO3	The student will be able to have the detailed knowledge on how to use hospital information systems.
CO4	The student will be able to communicate with speakers of English language

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES

COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M

Category	Soft Skills
Approval	46 th Meeting of Academic Council held in Aug, 2017

UAH19CT107	MICROBIOLOGY
	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Microbiology
OBJECTIVES	This course is designed to enable students to acquire understanding of fundamentals of microbiology and identification of various microorganisms. It also provides opportunities for practicing infection control measures in hospital and community settings.

UNIT – I: General Bacteriology

Introduction & History of Microbiology, Classification & Morphology of Bacteria, Growth & nutrition, Culture Media & Methods, Sterilization & Disinfection, Fundamental aspects of antibacterial agents and antimicrobial susceptibility testing.

UNIT – II: Immunology

Infection, Immunity, Immunization schedule, applications of antigen antibody reactions, Hypersensitivity, Tumor & Transplantation Immunology.

UNIT – III: Virology

Introduction to virology, viral hepatitis, poliomyelitis, Rabies, Human immunodeficiency virus.

UNIT – IV Mycology & Parasitology

Introduction to mycology, pathogenic yeasts & fungi, Introduction to parasitology, Amoebiasis, Malaria, Helminthic infections.

UNIT – V: Applied Microbiology

Outline of common bacterial diseases, treatment & Prevention-Respiratory tract infections (upper & lower), Meningitis (septic & aseptic), Enteric infections (food poisoning & gastro enteritis), Anaerobic infections, Skin & soft tissue infections, Urinary tract infections, sexually transmitted diseases, Tuberculosis & Leprosy, Hospital acquired infections, Biomedical waste management.

PRACTICAL EXERCISES: Spotters, Gram staining.

Reference Books

1. Textbook of Microbiology by Ananthanarayan & Panicker's, 8th edition-Universities Press (India) PVT LTD.
2. Textbook of Microbiology by C. P. Baveja, 4th edition, Arya Publications.
3. Textbook of Medical Parasitology, CK Jayaram Paniker, 5th edition, Jaypee Publications.
4. Medical Parasitology by C. P. Baveja & V. Baveja, 2nd edition, Arya Publications.
5. Publications.

COURSE OUTCOMES	
CO1	The student will be able to understand the morphological characters of bacteria.
CO2	The student will be able to master the preparation of smear, fixation and staining of bacterial smears and its quality control methods
CO3	The student will be able to learn to use microscope, autoclave, hot air oven, water bath, steamer, filters

CO4	The student will be able to differentiate between innate and adaptive immunity, and explain the main defences lines as well as biological barrier to the infections.

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES

COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

	PATHOLOGY
UAH19CT108	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Pathology
OBJECTIVES	This course is designed for students to develop an understanding of general and systemic pathology. It helps them to know pathophysiology of common diseases

UNIT-I: General Pathology I: Cellular Pathology, Acute and Chronic Inflammation, Tissue Renewal Regeneration and Repair, Hemodynamic Disorders Thromboembolic Disease and Shock

Introduction to Pathology, Adaptations Of Cellular Growth And Differentiation, Causes Of Cell Injury, Mechanisms Of Cell Injury, Necrosis, Apoptosis, Pathologic Calcification, Cellular Aging, Acute Inflammation – Mediators Of Inflammation Outcomes Of Acute Inflammation, Morphologic Patterns Of Acute Inflammation, Chronic Inflammation – Causes Of Chronic Inflammation, Granulomatous Inflammation, Healing By Repair, Scar formation And Fibrosis, Cutaneous Wound Healing, Healing By First Intention, Healing By Second Intention, Edema, Hemostasis and Thrombosis, Infarction, Shock

UNIT-II: General Pathology II: Diseases of the Immune System, Neoplasia, Environmental And Nutritional Disease, Diseases Of Infancy And Childhood

Innate Immunity, Adaptive Immunity, Components Of The Immune System, Mechanisms Of Hypersensitivity Reactions, Acquired Immunodeficiency Syndrome (AIDS), Neoplasia – Definition and Nomenclature, Characteristics Of Benign And Malignant Neoplasm's, Molecular Basis Of Cancer, Essential Alterations For Malignant Transformation, Clinical Aspects Of Neoplasia, Laboratory Diagnosis Of Cancer, Common Environmental And Nutritional Pathology, Nutritional Diseases, Tumors And Tumor-Like Lesions Of Infancy And Childhood

UNIT-III: Systemic Pathology I: Blood Vessels, the Heart, Red Blood Cell and Bleeding Disorders, Diseases Of White Blood Cells

Arteriosclerosis, Atherosclerosis, Hypertensive Vascular Disease, Ischemic Heart Disease, Hypertensive Heart Disease, Valvular Heart Disease, Infective Endocarditic, Rheumatic Fever And Rheumatic Heart Disease, Cardiomyopathies, Leucopenia, Anemia's, Polycythemia, Bleeding Disorders, Reactive Proliferations Of White Cells, Definitions And Classifications of Lymphoid Neoplasm's and Myeloid Neoplasm's, Splenomegaly.

UNIT-IV: Systemic Pathology II: The Lung, The Gastrointestinal Tract, Liver And Biliary Tract

Acute Respiratory Distress Syndrome, Obstructive Pulmonary Diseases, Pulmonary Infections, Gastritis, Peptic Ulcer Disease, Inflammatory Bowel Diseases, Liver Function Tests, Hepatic Failure, Cirrhosis, Portal Hypertension, Jaundice, Cholelithiasis

UNIT-V: Systemic Pathology III: The Urogenital System, the Breast, the Endocrine System, Bones Joints and Soft-Tissue, Peripheral Nerve and Skeletal Muscle, the Central Nervous System

Renal Function Tests, Nephrotic Syndrome, Nephritic Syndrome, Urolithiasis, Pap Smear, Carcinoma Of The Breast-Types And Classification, Thyroid Gland – Hyperthyroidism, Hypothyroidism, Thyroiditis, Graves“ Disease, Diffuse And Multinodular Goiters, Parathyroid Glands – Hyperparathyroidism, Hyperparathyroidism, Diabetes Mellitus, Fractures, Osteomyelitis, Arthritis, Osteoarthritis, Rheumatoid Arthritis, Infectious Arthritis, Diseases of Peripheral Nerve, Diseases of Skeletal Muscle, Infections of CNS – CSF Find

REFERENCE BOOKS

1. Pocket companion to Pathologic Basis of Disease by Robbins and Cotran, 7th edition, Saunders.
2. Pathology Quick Review and MCQs by Harsh Mohan, 2nd edition, Jaypee Publications.

COURSE OUTCOMES	
CO1	The student will be able to gain knowledge of general pathology.
CO2	The student will be able to gain knowledge pathology of neoplasms
CO3	The student will be able to gain knowledge of basics of community health.
CO4	The student will be able to gain knowledge of systemic pathology.

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CT109	PHARMACOLOGY
	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Pathology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pharmacology and knowledge of common drugs/group of drugs

UNIT-I: General Pharmacology

Introduction to pharmacology-various terminologies-sources & routes of drug administration – Absorption & Factors modifying drug absorption – Distribution of drugs – Metabolism: Phase II, - Excretion: routes, modes & kinetics of elimination – Excretion – Mechanism of drug action in brief, synergism & antagonism and Factors modifying drug action – Adverse drug reactions – ADR reporting & monitoring – Drug interactions.

UNIT-II: Central Nervous System & Respiratory System

Introduction to CNS and Neurotransmitters, drugs used in insomnia, Sedatives and hypnotics – diazepam – alprazolam, anti-anxiety drugs, Antiepileptic – phenytoin, carbamazepine, sodium valproate, General Anesthetics – halothane, isoflurane, sevoflurane – Local Anesthetics – lignocaine – list of other drugs, Alcohols – ethyl alcohol – disulfuram, Anti parkinsonians – levodopa – carbidopa, Opioids – morphine – naloxone – tramadol – pentazocine, NSAIDs – aspirin – diclofenac – ibuprofen – paracetamol – Cox 2 inhibitors. Drugs used in bronchial asthma and cough

UNIT-III: Cardio vascular system & blood

Drugs used in Ischemic Heart Disease-nitrates-Calcium channel blockers-nifedipine, verapamil-list of other drugs – Beta blockers – propranolol, atenolol – metoprolol and antiplatelets – aspirin, clopidogrel, and names of other drugs-fibrinolysis drugs-streptokinase and other drugs, Drugs used in CCF-digoxin and list of other drugs useful in CCF, Shock. Diuretics: 4 groups – Thiazides, Loop diuretics, Potassium sparing and osmotic diuretics. Hypertension – outline of drugs used in hypertension, Renin angiotensin system – ACE inhibitors – captopril, ramipril and names of other drugs – Receptor antagonist – losartan and list of other drugs, Antiarrhythmic drugs-classification – Quinidine, Lignocaine and amiodaron – Drugs for Hypercholesterolemia – statins. Drugs for anemia – oral & parenteral iron preparations, folic acid, vit B12 and erythropoietin. Coagulants and anti-coagulants

UNIT-IV: Hormones and GIT

Contraceptives – oral and injectable, Corticosteroids – glucocorticoids – hydrocortisone-prednisolone-dexamethasone and names of topical steroids – Insulin – Oral hypoglycemic – sulphonyl ureas, biguanides and others, Thyroid and Antithyroid drugs, Sex Hormones-Estrogen and anti estrogens, Progestin and Anti progestin's, Androgen And anti androgens. Emetics and anti emetics-metoclopramide and domperidone, Drugs used in peptic ulcer, constipation-lactulose & Diarrhea-ORS-Loperamide.

UNIT-V: Chemotherapy and Miscellaneous

Introduction – Beta lactam antibiotics: Penicillin's – natural, semi synthetic penicillin's – amoxicillin – cloxacillin-clauvulinic acid – sulbactam – Cephalosporin's – cephalexin – cefuroxime – cefixime – ceftriaxone-cefipime, Broad spectrum antibiotics – Doxycycline – chloramphenicol-imipenem-Macrolides – erythromycin, azithromycin and others – Quinolones- ciprofloxacin and list of other drugs and sulfonamides- cotrimoxazole-Amino glycosides-gentamycin, amikacin and names of other drugs Anti TB-first line drugs, Anti leprosy-dapsone and clofazimine Anti-malarial- chloroquine- mefloquine and artemisinins, Anti-fungal- amphotericin B- fluconazole and topical drugs & Anti-viral drugs- acyclovir and anti HIV, Anti protozoals- metronidazole – Anthelmintics- albendazole- praziquantel.

Anti-cancer drugs-Introduction – Anti metabolites- methotrexate- 6 mercapto purine- Alkylating agents-

cyclophosphamide- busulphan and cisplatin – Plant products- vinblatin- vincristine- taxanes, antibiotics- actinomycin D- monoclonal antibodies. Immuno modulators- cyclosporine, tacrolimus, azathioprine and steroids. Toxicology-Drugs used in common poisoning, organophosphates, methyl alcohol, Benzodiazepam.

REFERENCE BOOKS:

1. Lippincott's Illustrated Reviews: Pharmacology, 5th edition, by Richard A. Harvey and Pamela C. Champe, Lippincott Williams & Wilkins Publisher
2. Essentials of Medical Pharmacology: K.D. Tripathi, 6th edition, Jaypee Publishers.

COURSE OUTCOMES						
CO1	The student will be able to gain basic knowledge in pharmacology.					
CO2	The student will be able to gain knowledge of detailed systemic pharmacology.					
CO3	The student will be able to gain knowledge of detailed knowledge of drugs and groups of drugs.					
CO4	The student will be able to gain knowledge of action of drugs					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CT110	ENVIRONMENTAL SCIENCE AND COMMUNITY MEDICINE
	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Community Medicine
OBJECTIVES	This course is designed for students to practice community health nursing for the individual, family and groups at both urban and rural settings by using concept and principles of health and community health nursing. It also is designed for students to understand the natural resources and environmental pollution

UNIT – I:

Natural Resources: Introduction, Multi-disciplinary nature of environmental studies, Earth Resources and Man, Renewable and Non-Renewable Resources, Water Resources, Mineral Resources: Food Resources: Effect of modern agriculture, Fertilizer/pesticide problems, Water logging, and salinity, Energy Resources.

Ecosystems: Concept of an Ecosystem, Structure and Functions of an Ecosystem, Producers, Consumers and Decomposers, Cycles in the Ecosystem

Biodiversity: Introduction, Definition: Genetic, Species, Ecosystem diversity, India as a Mega Diversity Nation, Hotspots Of Biodiversity Threats to Biodiversity. Poaching of Wildlife, Man-Wildlife Conflicts, Endangered and Endemic Species Of India, Conservation of Biodiversity

UNIT – II:

Pollution: Definition, Causes, Effects and Control Measures of Air Pollution, Water Pollution, Pollution, Marine Pollution, Noise Pollution, Thermal Pollution, Nuclear hazards, Solid Waste Management role of Individuals in Pollution Prevention.

Social Issues Human, Population and Environment: From Unsustainable To Sustainable Development, Urban Problems Related To Energy, Water Conservation, rain Water Harvesting, global warming, acid rain, ozone layer depletion, nuclear accidents and nuclear holocaust. Environment Protection Act.

UNIT – III:

Concept of health & disease: Concept of health, Definition of health, Philosophy of health- Dimension of health – Concept of wellbeing, Spectrum of health, Responsibility of health – Determinates of health & Indicators of health – Concepts of disease & Concepts of cessation – Natural history of disease – Iceberg phenomenon, Concepts of control – Concepts of prevention – Modes of Intervention, Changing pattern of disease.

UNIT – IV:

Epidemiology: Definition & explanation, Aims, Epidemiologic approach, Basic measurements in epidemiology & tools of measurements – Measurements of Mortality & Morbidity, Epidemiologic methods- Descriptive epidemiology-Analytical epidemiology – case control study – analytical epidemiology – Cohort study – Experimental epidemiology – RCT – Association & Causation Uses of epidemiology (Criteria for judging causality) – Infection disease epidemiology Definitions Dynamic of disease transmission & Modes of transmission – Disinfection – Definition Types Agents used Recommended disinfection procedures-Investigation of an epidemic.

Unit – V:

Environment & health: Definition & components (environment sanitation environmental sanitation) Water: Safe & Whole some water Requirements Uses source of water supply (sanitary well)-Purification of water (1). Large scale purification, (2). Small scale purification – Water Quality – Special treatment of water

Air: Composition The air of occupied room discomfort. Air pollution & its effects. Prevention & Control of air pollution

Ventilation: Definition Standards of ventilation Types of ventilation. Light, Noise & Radiation, Metrological environment, Housing, Disposal of waste Excreta disposal

PRACTICALS:

1. Epidemiology Problems
2. Environmental spotters

REFERENCE BOOK

1. Textbook of Preventive and Social medicine by k. Park, 21st edition, published by Banarsidas Bhanot

COURSE OUTCOMES						
CO1	The student will be able to know the concept of health & illness					
CO2	The student will be able to know epidemiology of common communicable diseases					
CO3	The student will be able to know epidemiology of common non communicable diseases					
CO4	The student will be able to know the effects of pollution on humans.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CT111	BASICS OF NURSING
	Total Contact Periods – 80
	Total credits -5
	Course Designed by – Department of Community Medicine
OBJECTIVES	This course is designed to help the students to develop an understanding of the nursing profession, philosophy, objectives, theories and application of nursing in various clinical settings. It is aimed at helping the students to acquire knowledge, understanding and skills in techniques of nursing and practice them in supervised clinical settings.

Unit I: Introduction of Health

Health care system, major health problems of the country, nature of disease pattern, technological advances and national health programmes, health for all by 2000 AD. Role of health care workers in the health care delivery system, impact of illness of the individual family and community. History of Nursing, Communication Skills -Relationship with patients, process of communication

UNIT II: Concept of Nursing

Nursing Processes- Problems solving approach, assessment, diagnosis, planning, implementation and evaluation.

Unit III: First Aid and Nursing in Emergencies

Definition, basic principles, scope and rules, Wounds, hemorrhages, shock, fracture, dislocation and muscle injuries, respiratory emergencies, resuscitation, unconsciousness, Miscellaneous conditions, burns, scalds, foreign bodies in the skin, eyes, ear, nose, throat and stomach. Frost bite, effects of heart cramps, bites and stings. Poisoning, Transporting injured persons.

Unit IV: Personal Hygiene and Health

Care of skin, mouth, eyes, nails, hair, Menstrual hygiene, clothing, mental health, common health problems of poor personal hygiene. Comfort, Rest and Sleep, Hospital Housekeeping

Unit V: Health Education

Introduction to principles and methods of health education. Use of audio visual aids, mass education, role of nurse in health education.

Course outcome:

- 1) Knowledge on concept of health, health-illness continuum and health care delivery system.
- 2) Knowledge on scope of nursing practice.
- 3) Knowledge on concept, theories and models of nursing practice.
- 4) Desirable attitude to ethics and professional conduct.

COURSE OUTCOMES	
CO1	The student will be able to gain knowledge on concept of health, health-illness continuum and health care delivery system.
CO2	The student will be able to gain knowledge on scope of nursing practice.
CO3	The student will be able to gain knowledge on concept, theories and models of nursing practice.

CO4	The student will be able to gain knowledge on concept, theories and models of nursing practice.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAPH17CT201	MEDICINE & PHARMACOLOGY THEORY
	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Pharmacology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pharmacology and knowledge of common drugs/group of drugs

Unit I

Introduction to Medical terminology-roots, prefixes, and suffixes, Vocabulary problems-genetics, aging, infection, injury Skeletal System-Bones and Ligaments-disorders, diagnosis and treatment Muscular system-skeletal, smooth and cardiac muscles-disorders, diagnosis and treatment

Unit 2

Nervous system – brain, spinal cord, peripheral nerves, sense organs-disorders, diagnosis and treatment
 Endocrine system-disorders, diagnosis and treatment
 Diagnosis includes-blood work, X-ray and imaging
 Treatment includes-medical and surgical

Unit 3

Cardiovascular system-heart, blood and blood vessels-disorders, diagnosis and treatment
 Respiratory system-air passages, lungs, diaphragm-disorders, diagnosis and treatment
 Integumentary system-skin, hair and nails-disorders, diagnosis and treatment
 Immune and lymphatic system-disorders, diagnosis and treatment
 Diagnosis-blood and imaging
 Treatment-Medical and Surgical

Unit 4

Digestive system-mouth, throat, stomach, intestine, liver, gallbladder, pancreas-disorders,
 Diagnosis and treatment
 Urinary system-kidneys, ureters, bladder, urethra-disorders, diagnosis and
 Treatment Reproductive system- male and Female-disorders, diagnosis and treatment
 Emergency medicine/Medical ethics

Unit 5 (Pharmacology)

Basic drug effect, classification of drugs acting on nervous, heart, blood pressure, respiratory system, gastrointestinal system, kidneys, hormones, musculoskeletal system and analgesics etc.,

Common drugs – effects and side effects and drug interactions.

Narcotics and scheduled drugs.

REFERENCE BOOKS

1. Principles and Practice of Medicine Davidson Churchill Livingstone, London 23rd edition.
2. Text Book of Medicine API API, Mumbai 11th edition.
3. Clinical Medicine Kumar and Clerk Saunders
4. Manual of Practical Medicine Allagappan Jaypee Brothers
5. Clinical Methods Hutchison W.B Saunders
6. Clinical Examination ISE Macleod's Churchill Livingstone
7. Essentials of Medical Pharmacology K.D Tripathi Jaypee Brothers

COURSE OUTCOMES						
CO1	To understand the basic medical terminology.					
CO2	To learn about different kind of medicine in each body parts (cardiovascular, Digestive System)					
CO3	To learn about basic classification of drugs acting on nervous system,					
CO4	The student will be able to gain knowledge on common drugs, side effects & drug interactions.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	A	B	C	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	S			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CL202	MEDICINE & PHARMACOLOGY PRACTICAL
	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Pharmacology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pharmacology and knowledge of common drugs/group of drugs.

- 1 Case sheet writing
- 2 Assessment of Communication to the patient
- 3 BLS (demonstration of basic life support)
- 4 Ryle's tube, Foley`s colostomy, drains care
- 5 Anesthesiology-assisting the anesthetist and different techniques of anesthesia
- 6 Giving a common drug strip and asking questions
- 7 Giving an ECG strip and asking basic questions
- 8 ECG taking and interpretation-common cases only

Exam pattern (UE) total marks-60

1. Spotters 10 (10x2=20)
2. Charts/stations-5 (5x4=20)
3. Viva-20

REFERENCE BOOKS

- 1 Clinical Medicine Kumar and Clerk Saunders
- 2 Manual of Practical Medicine Allagappan Jaypee Brothers
- 3 Clinical Methods Hutchison W.B Saunders
- 4 Clinical Examination ISE Macleod`s Churchill Livingstone

COURSE OUTCOMES						
CO1	To Demonstrate the Basic Life Support.					
CO2	To demonstrate the ECG strip & Interpretation in common cases.					
CO3	To demonstrate the assisting, the anesthetist & different techniques of anesthesia.					
CO4	The student will be able to gain knowledge of different between in different ECG					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT203	SURGERY / EQUIPMENT'S THEORY
	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Surgery
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of surgical conditions and knowledge of common equipment.

Unit 1

History of Surgery, role of surgeon, importance of teamwork, stresses arising during operative procedure, surgical terminology, types of incision and their indications, internal and external hemorrhage-signs and symptoms, management, tourniquets-use and duration of application and dangers of use.

Sutures and surgical instruments

Unit 2

Pathogenesis, causes, epidemiology, clinical presentation, investigations and management of diseases of the following systems: -

Skin-ulcers, wounds, burns, skin infections (boil, carbuncle, abscess, cysts (epidermoid, dermoid) tumors (basal cell squamous cell carcinoma and melanoma)

Unit 3

Head and neck region-congenital anomalies (cleft lip, cleft palate, bronchial cyst and fistula, thyroglossal cyst) parotid and submandibular glands, oral ulcers, leukoplakia

Jaw tumours, squamous carcinoma of oral cavity, pharynx and larynx

Thyroid and lymph nodes swelling

Arteries-limb ischemia, non-invasive vascular diagnostic tests, atheromatous disease, aneurysm

Raynaud's syndrome, emboli

Veins-Varicose veins, deep vein thrombosis and pulmonary embolism

Unit 4

Breast –mastalgia, fibroadenoma, cyst, breast abscess, cancer

Oesophagus-dysphagia, reflux, hiatus hernia, benign and malignant tumours

Stomach and duodenum-peptic ulcer, carcinoma, pyloric stenosis

Small intestine-small bowel obstruction, intestinal tuberculosis Colon and rectum-amoebic colitis, ulcerative colitis colorectal cancer

Appendix-acute appendicitis, acute abdomen

Anus-Hemorrhoids, pruritus ani, fissure and fistula-in-ano, anorectal abscesses, cancer

Unit 5

Peritoneum and intraperitoneal abscesses, liver – trauma, abscess, cancer

Biliary tract-gallstone disease and carcinoma, pancreas-pancreatitis carcinoma

Hernias of abdominal Wall-Inguinal, femoral, umbilical and epigastric

Urology-diagnostic studies, urinary calculi urinary infection, prostatic hyperplasia, tumors Epididymis Orchitis, hydrocele, carcinoma of testicle and penis

Neurology-diagnosis, treatment and rehabilitation of disorders of entire nervous system

Various procedures like micro discectomy and laminectomy etc.

REFERENCE BOOK

- 1 Bailey and Love's Short Practice of Surger. Ruseel RCG, Wiliams NS. Arnold Heinemann Publishers.
- 2 Das K. A Manual on clinical surgery.
- 3 Hai AA. ASI Text book of Surgery. Tata Mcgraw. Publishers.
- 4 Manual of Surgical Equipment, Rajendra Singh Sewta
- 5 Principles and Interpretation of Chest X-rays, P. A. Mahesh, B. Vidyasagar, B. S. Jayaraj

COURSE OUTCOMES	
CO1	To understand the importance of surgical team management
CO2	To understand the major surgical management of each part

CO3	To learn about the list of equipment in each surgical treatment.					
CO4	To understand the disease condition in head & abdominal region					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs(POs)	a	b	c	D	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CL204	SURGERY / EQUIPMENT'S PRACTICAL
	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Surgery
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of surgical conditions and knowledge of common equipment.

1 LP /Pleural tapping/ascitic fluid tapping and other common procedures-providing a scenario and asking questions

2 Normal chest X ray presentation/common abnormal pattern

Exam pattern (UE) total marks-60

1. Spotters 10 (10x2=20)

2. Charts/stations-5 (5x4=20)

3. Viva-20

REFERANCE BOOK

- 1 Das K. A Manual on clinical surgery.
- 2 Hai AA. ASI Text book of Surgery. Tata Mcgraw. Publishers.
- 3 Manual of Surgical Equipment, Rajendra Singh Sewta
- 4 Principles and Interpretation of Chest X-rays, P. A. Mahesh, B. Vidyasagar, B. S. Jayaraj

COURSE OUTCOMES						
CO1	The student will be able to gain knowledge about to understand and practice to do pleural tapping					
CO2	The student will be able to gain knowledge about to understand about how to do Ascitic Fluid tapping					
CO3	To students will be able to understand about difference between X rays					
CO4	The student will be able to gain knowledge about to demonstrate the normal & abnormal pattern chest X Ray					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	A	b	C	D	e	f
1	S		M		s	
2				s		M
3	M		S			
4	S			S		M
Category	Surgical					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CT205	BASIC PRINCIPLES OF HOSPITAL MANAGEMENT
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	Total Contact Periods – 60
	Total credits -4
	Course Designed by – Department of Hospital Administration
OBJECTIVES	The course will offer basic knowledge about management planning, Organizing, staffing, motivating and controlling management in Health care units

Unit I: Introduction to management & Organization:

The evolution of Management, Definition and Importance of Management. Planning – Organizing – staffing – Motivating – Leading – Controlling. Management of health care units (in brief). Individual behavior in organization; organizational functioning (Group/Individual); Perception; Motivation MBO; Organizational Development.

Unit II: Planning and Management of Hospitals & Clinical Services:

Building and physical layout – space required for separate function – Planning of infrastructure facilities, clinical services, equipment & Human resources – Types of Hospitals. Organization and administration of various clinical services; outpatient services. In-patient services, emergency services, operation theatres, ICU’s and super specialty services.

Unit III: Organizing of support clinical services & Hospital management:

Imaging – CSSD – Laboratory – Blood Bank – diet – Medical Records – Mortuary. Housekeeping – Maintenance (Water, Electricity, Civil, Air Conditioning, Lift) – Pest Control – transport – Security. Forecasting – Purchasing & procurement (Sourcing, methods and procedures) – storing & issuing, Concept of inventory control, Maintenance of equipment and contracts (with special reference to major biomedical equipment). Trends in financing of Health and Hospital Services – Classification of Hospitals depending on source of financing – roles of financial institutions.

Unit IV: Personnel and quality Management in Hospital & Marketing:

Concepts – Manpower planning – Training & Developments – Team Building – Conflict Management – Performance appraisal – Office rules and regulations Outline of Strategic Planning and Marketing.

Concepts of quality – Professional Audit System – QA program – Medical Audit – Quality Circle – TOM – Patient Satisfaction – ISO 9000. A brief outline – computerization in hospital departments. Concept, Techniques, Indicators, Evaluation of Efficiency & Effectiveness evaluation of hospital and medical care

services.

Unit V: Ethical, current issues and Legal Aspects of Hospitals management services:

Laws related to Hospital – Medico Legal Cases law of Torts – Autopsy – Dying delaration – CPA. – Waste Management – Telemedicine – Organ Transplantation – Rehabilitation Service – Health Insurance.

Operations Research and Quantitative Methods in Hospital Administration & Nursing Services in a Hospital.

COURSE OUTCOMES						
CO1	The student will be able to gain knowledge about infrastructure facilities, clinical services, equipment and Human resources					
CO2	The student will be able to understand how to maintain inpatient services, outpatient services, ICUs, Emergency services, Operation theatres and super speciality services					
CO3	The student will be able know about Manpower planning, training, developing and knowledge about marketing					
CO4	The student will be able to learn developing and knowledge about marketing					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Management					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CT205	IN SERVICE TRAINING CLINICAL DEPARTMENTS
	ROTATION PRACTICAL
	Total Contact Periods –180

	Total credits -5
	Course Designed by – Department of Hospital Administration
OBJECTIVES	The course will offer basic knowledge about discharge summaries, biochemical values into the patient's file, develop to communication skill and management of patient's file.

- 1 Preparing the discharge summaries
- 2 Entry of biochemical values into the patient's file
- 3 Assess the communication skills by giving a scenario
- 4 Medical ward
- 5 Surgical ward

Exam pattern (UE) total marks-75

1. Spotters 10 (10x3=30)
2. Charts/stations-5 (5x5=25)
3. Viva-20

REFERANCE BOOK

- 1 Bailey and Love's Short Practice of Surger. Ruseel RCG, Wiliams NS. Arnold Heinemann Publishers.
- 2 Das K. A Manual on clinical surgery.
- 3 Hai AA. ASI Text book of Surgery. Tata Mcgraw. Publishers

COURSE OUTCOMES	
CO1	To introduce how to preparing the discharge summaries
CO2	To get know about how to enter biochemical values in patient's file

CO3	To get know about patient details in medical & surgical ward					
CO4	To student will be able to understand how to maintain patient's file.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Management					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT207	PULMONOLOGY THEORY
	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Pulmonology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pulmonology related disease conditions..

Unit 1

Upper airway diseases-basic respiratory mechanics, causes and pathophysiology of hypoxia and hypercapnia

Unit 2

Respiratory failure-acute, chronic mechanism and management

Allergy and bronchial asthma, chronic obstructive lung diseases

Unit 3

Restrictive / interstitial lung diseases, pulmonary tuberculosis, occupational lung diseases

Unit 4

Lung Cancer-Primary and secondary, hemoptysis, pneumonia

Pleural diseases-pneumothorax, Pleural effusion

Unit 5

Cardiogenic and noncardiogenic pulmonary edema

Diseases of the Diaphragm and chest wall

REFERANCE BOOK

- 1 Harrison’s Principles of Internal Medicine
- 2 Davidson’s Book of Medicine
- 3 Macleod’s Text Book of clinical examination
- 4 Hutchison’s Clinical Examination

COURSE OUTCOMES						
CO1	To understand the upper respiratory tract mechanism & Lower respiratory tract mechanism.					
CO2	To knowledge in basic pulmonology system					
CO3	The student will be able know about basic of pulmonology related disease conditions.					
CO4	The student will be understanding about respiratory failure, cardiogenic & non cardiogenic conditions					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Pulmonology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

	PULMONOLOGY PRACTICAL
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UAPH17CL208	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Pulmonology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pulmonology related disease conditions..

- 1 Phlebotomy, collection of blood samples and storage
- 2 Urine Collection/analysis/normal and abnormal values significance
- 3 Biochemical parameters and their normal and abnormal values/significance
- 3 Viral markers and their significance
- 4 Culture methods/techniques/swab etc.
- 5 CSF / Pleural fluid / Ascitic fluid analysis and their significance
- 6 Mantoux test and its significance
- 7 Viral markers / HIV testing – interpretation
- 8 Sterile technique / sterilization of lab
- 9 P.F.T. (Pulmonology function test)

REFERANCE BOOK

1. Harrison’s Principles of Internal Medicine
2. Davidson’s Book of Medicine
3. Macleod’s Text Book of clinical examination
4. Hutchison’s Clinical Examination

COURSE OUTCOMES

CO1	To understand how to collect blood samples & storage					
CO2	To get knowledge about urine collection/analysis of urine & Interpretations					
CO3	The student will be able know about biochemical parameters & their normal and abnormal values					
CO4	To understand the viral markers/P.F.T, Montoux test and significance					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Pulmonology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

PAEDIATRICS & GERIATRICS THEORY
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UAPH17CT209	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Pediatrics
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pediatric growth and development, Nutritional requirements and physiological and psychological fundamentals of aging process.

Unit 1

Definition, population, morbidity and mortality in children, maternal, perinatal, neonatal, infant and preschool mortality rates, current National programmes like ICDS, RCH, vitamin A prophylaxis, UIP, IMCI, pulse Polio, AFP, ARI Diarrhoea control programmes

Growth and Development-Anthropometry-Measurement and interpretation of weight, length/height, head circumference, mid-arm circumference. Use of weighing machines, infant meter, interpretation of growth charts: Road to health card and percentile growth curves, abnormal growth patterns-failure to thrive, short stature, growth pattern of different organ systems like lymphoid, brain and sex organs, normal pattern of teeth eruption.

Important milestones in infancy and early childhood in areas of gross motor, fine motor, language and personal-social development psychological and behavioral problems

Measurement and interpretation of sitting height, US: LS ratio and arm span

Age-independent anthropometric measurement principles and application

Unit 2

Nutrition – normal requirements of carbohydrates, protein, fats, minerals and vitamins for newborn, children, pregnant and lactating mothers. Common food sources.

Breast feeding-colostrum and composition of breast milk, initiation and technique of feeding, hazards and demerits of prelacteal feed, top milk and bottle- feeding. Feeding of LBW babies. Infant feeding weaning foods, methods of weaning. Assessment of nutritional status of child based on history and physical examination

Characteristics of transitional and mature milk (foremilk and Hindmilk)

Protein energy malnutrition-definition, classification, features, causes and management.

Vitamins-etio pathogenesis, clinical feature, biochemical and radiological findings, differential diagnosis and management of nutritional disorders

Definition, causes and management of obesity

Immunization: - National immunization programme, vaccine preservation and cold-chain

Vaccination types, contents, efficacy, storage, dose, site, route, contraindications and adverse reactions BCG, DPT, OPV, Measles, MMR and Typhoid.

Pulse Polio Immunization, AFP (Acute flaccid paralysis) surveillance

Special vaccines- Hepatitis B, H influenza B, Pneumococcal, Hepatitis A, chicken pox, Meningococcal and Rabies

Unit 3

Disorders of respiratory system, gastrointestinal tract, central nervous system, cardiovascular system, genitor-urinary system and hematological disorder

Infectious disease – epidemiology, basic pathology, symptoms, signs, complications investigations, differential diagnosis, management and prevention of common bacterial, viral and parasitic infection

Special reference to vaccine-preventable disease-Diarrhoea, LRTI, TB, Polio meningitis, diphtheria, whooping cough, tetanus, measles, mumps, rubella, typhoid, viral hepatitis, Cholera, chicken pox, giardiasis, Amoebiasis, intestinal helminthiasis, malaria, dengue fever, AIDS, Kala azar, leprosy, Chlamydia infection.

Unit 4

Paediatric emergencies –status epilepticus, status asthmaticus / acute severe asthma, shock and anaphylaxis, burns, hypertensive emergencies, gastrointestinal bleed, comatose child, congestive cardiac failure, acute renal failure.

Genetics- principles of inheritance and diagnosis of genetic Disorders-Down`s syndrome

Unit 5

Geriatrics-physiological and psychological fundamentals of aging process

Diet for the aged and management of nutritional disorders

Disorders of major geriatric ailments and management-

Medical-infections, dehydration acute confusional state, osteoporosis,

Degenerative joint diseases, effects of immobility-prevention of contracture and bedsores. Economic and psychosocial needs of the aged. Role of various health care providers including family

REFERENCE BOOK

1. Textbook of Paediatrics – Indian Academy of Paediatrics (IAP)
2. Essential Pediatrics- OP Ghai, CBS Publishers
3. Principles of Paediatrics and Neonatal emergencies – Jaypee Publications

4. Care of Newborn- Meharbaan Singh- Sagar Publications.
5. Hutchison's Clinical Methods- Swash Publications
6. Textbook of Geriatric Medicine by Pratap Sanchetee

COURSE OUTCOMES						
CO1	To understand the fundamentals of physiological & psychological aging process in geriatrics					
CO2	To learn about the growth & development of pediatric					
CO3	To get learn about normal nutritional requirement in each stages of human being					
CO4	To understand the basic disorders involved in respiratory system, gastrointestinal tract, central nervous system, cardiovascular system, genitor-urinary system and hematological disorder					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Pediatrics and Geriatrics					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

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UAPH17CL210	PAEDIATRICS & GERIATRICS PRACTICAL
	Total Contact Periods – 80
	Total credits -4
	Course Designed by – Department of Pediatrics
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of pediatric growth and development, Nutritional requirements and physiological and psychological fundamentals of aging process.

1. Life style modifications and their importance-giving some examples and asking questions
2. Dealing with an unconscious patient
3. Care of terminally ill patient
4. Bedsore and its care
5. Neonatal care and resuscitation

Exam pattern (UE) total marks-60

Spotters 10 (10x2=20)

1. Charts/stations-5 (5x4=20)
2. Viva-20

REFERANCE BOOK

1. Textbook of Paediatrics – Indian Academy of Paediatrics (IAP)
2. Essential Pediatrics- OP Ghai, CBS Publishers
3. Principles of Paediatrics and Neonatal emergencies – Jaypee Publications
4. Care of Newborn- Meharbaan Singh- Sagar Publications.
5. Hutchison’s Clinical Methods- Swash Publications
6. Textbook of Geriatric Medicine by Pratap Sanchetee

COURSE OUTCOMES						
CO1	To get learn about life style modifications & their importance					
CO2	To understand the how to deal with unconscious patient and how to care of terminally ill patient					
CO3	The student will be understanding about to understand the how to care bedsores patients					
CO4	The student will be able to understand about neonatal care & resuscitation					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Pediatrics and Geriatrics					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CT206	HEALTH CARE MANAGEMENT
	Total Contact Periods – 60
	Total credits -4
	Course Designed by – Department of Hospital Administration
OBJECTIVES	To Explain the effect of personality, attitudes, perceptions and attributions on their own and other’s behaviors in team and organizational settings.

UNIT I: Concept of Health Care and Health Policy

Health in Medical Care, Indigenous systems of Health Care & their relevance, Framework for Health

Policy Development.

UNIT II: Health Organisation

Historical development of Health Care System in the third world & India, Organization & Structure of Health administration in India, Type of Health Organization including International Organizations, Private & Voluntary Health care provider, Distribution of Health Care Services, Health Care System in Public Sector Organization, Health systems of Various Countries.

UNIT III: Health Policy and National Health Programme

National Health Policy, Drug Policy, National Health Programs (Malaria, T.B., Blindness, AIDS etc.,) Evaluation of Health Programs (Developing indicators for evaluation), Medical Education & Health Manpower Development.

UNIT IV: Health Economics – Fundamentals of Economics

Scope & Coverage, Demand for Health Services, Health as an Investment, Population, health of Economic Development. **Economics of Health-**

Population based health services, Economics of Communicable and Non Communicable diseases

UNIT V: Methods & Techniques of Economic Evaluation of Health Program

Cost Benefit & Cost Effective Methods

- **Household & Health**

Health Expenditure & Outcome, Rationale for Government action, Household capacity, income and schooling

- **Health Insurance.**

COURSE OUTCOMES	
CO1	The student will be able to Develop skills in using materials tools and/or technology central to health care management
CO2	The student will be able to understand perspectives and values of health care management;
CO3	The student will be able to Integrate health care management theory with real world situations
CO4	The student will be to Develop the ability to work productively with others in diverse teams

MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CL212	IN SERVICE TRAINING CLINICAL DEPARTMENTS ON ROTATION
	Total Contact Periods –180
	Total credits -5
	Course Designed by – Department of Pediatrics
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge of blood test and slide preparation/ staining

- 1 Pulmonology Department
- 2 Blood counts and ESR
- 2 Malarial Parasite identification and its test
- 4 Disposing lab waste materials
- 5 Slide preparation / staining
- 6 Pediatric ward

Exam pattern (UE) total marks-75

1. Spotters 10 (10x3=30)
2. Charts/stations-5 (5x5=25)
3. Viva-20

REFERANCE BOOK

1. Practical Pathology P. Chakraborty Gargi Chakraborty New Central Book Agency, Kolkotta
2. Text Book of Haematology Dr. Tejinder Singh Arya Publications, Sirmour (H.P)

3. Ramanik Sood, Laboratory Technology (Methods and Interpretations) J.P. Bros, New Delhi,
4. Wedling Medical Laboratory Procedures, J.P. Bros, New Delhi.
5. Sachdev K N, Clinical Pathology & Bacteriology, J.P. Bros, New Delhi
6. Chatterjee K.D. Parasitology – in relation to clinical medicine, Chatterjee Medical publication, Calcutta.
7. Ananthnarayan & Panikar, Text book of Medical Microbiology,
8. Basic Laboratory Procedures in Clinical Bacteriology, J.P. Brothers, New Delhi.

COURSE OUTCOMES						
CO1	To understand about blood counts, ESR & slide preparation & staining techniques					
CO2	To get knowledge about malarial parasite identification & test					
CO3	The student will be able to understand about disposing lab waste materials					
CO4	The student will be able to understand about pediatric condition.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT313	OBSTETRICS & GYNAECOLOGY THEORY [UE]
	Total Contact Periods –60
	Total credits -4
	Course Designed by – Department of Obstetrics & Gynecology
OBJECTIVES	This course is designed to enable students to acquire understanding of basic of obstetrics & Gynecological related health condition and identification of various microorganisms.

Unit 1

Bony pelvis-important landmarks of obstetrics significance, fetal skull

Physiological changes in pregnancy/menopause

Conception, abortions, gestational trophoblastic diseases

Vulva-cyst, inflammation, neoplastic

Uterus-endometriosis, adenomyosis, hyperplasia, atrophy, carcinoma

Cervix-erosion, infections, malignancy

Infections-STD, Genital TB, HIV, Torch, vertical transmission of HIV

Unit 2

Obstetrics-Diagnosis of pregnancy, antenatal care and fetal surveillance, first trimester bleeding, normal and abnormal presentations and positions, dystocia due to bony pelvis, soft tissue, high risk of pregnancies, ICGR, IUD, preterm labour, premature rupture of membranes poly and oligohydramnios, postdated delivery

Unit 3

Prolonged labour, obstructed labour, ruptured uterus, previous LSCS third trimester bleeding, preeclampsia and eclampsia, medical disorders complicating pregnancy, surgical emergencies in obstetrics, Rh iso immunization, partogram, ultrasound in obstetrics, fetal monitoring, active management of labour, neonatal resuscitation, analgesia and anesthesia in obstetrics, instrumental deliveries, LSCS, third stage of complications normal and abnormal puerperium, morbidity and mortality, medical auditing in obstetrics.

Unit 4

Gynaecology: -Maldevelopment, injuries, infections, cysts, tumours of female genital tract

Vulva- inflammation, ulcers, atrophy, dystrophies, cysts, neoplasm

Vagina- leucorrhoea, infections, carcinoma

Cervix-erosion, ulcer, dysplasia, carcinoma

Uterus-prolapse, displacements (inversion and retroversion) endometriosis

Abnormal uterine bleeding/post menopause bleeding, endometrial hyperplasia benign and malignant tumors

Primary and secondary amenorrhea, infertility, PCOD, assisted reproductive techniques, choriocarcinoma

Unit 5

Urinary system-stress incontinence, pelvic pain, low back

Ache cancer screening for genital malignancy and breast /Pap

Smear radiography outline and chemotherapy

Neonatology: - Neonatal resuscitation, meconium aspiration syndrome, preterm care, RDS, neonatal jaundice, congenital anomalies, birth injuries

REFERANCE BOOK

1. John DiBaise. Gastroenterology and Hepatology Board Review: Pearls of Wisdom, Third Edition
2. Isidor Segal, C Pitchumoni, Joseph Sung. Gastroenterology and Hepatology Manual.A Clinician's Guide to a Global Phenomenon

COURSE OUTCOMES						
CO1	To understand what are the physiological changes that happen during the maternity period.					
CO2	To get knowledge about antenatal care, pregnancy diagnosis and fetal surveillance.					
CO3	To get knowledge about high risk pregnancy & Labour complication					
CO4	The student will be able to understand about gynecological related conditions and health care management					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f

1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Obstetrics & Gynaecology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT314	OBSTETRICS & GYNAECOLOGY THEORY
	Total Contact Periods –120
	Total credits -5
	Course Designed by – Department of Obstetrics & Gynecology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge obstetrics & Gynecological related health condition.

- 1 Obstetrics 7 Gynecology instruments / sterile techniques / instruments (forceps)
- 2 Pregnancy test
- 3 Normal Delivery
- 4 Importance of PAP smear / terminal case

Exam pattern (UE) total marks-60

1. Spotters 10 (10x2=20)
2. Charts/stations-5 (5x4=20)
3. Viva-20

COURSE OUTCOMES	
CO1	To demonstrate the gynecology instruments/ sterile techniques
CO2	To get knowledge about importance of pregnancy test & PAP smear test

CO3	The students will be able to understand normal delivery and labour complication.					
CO4	The student will be able to understand about Obstetrics 7 Gynaecology instruments / sterile techniques					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Obstetrics & Gynaecology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT315	CARDIOLOGY & CARDIAC SURGERY THEORY
	Total Contact Periods –60
	Total credits -4
	Course Designed by – Department of Cardiology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about cardiovascular diagnostic tools & cardiovascular disease

Unit 1

Basics structural basis of cardiovascular disease, embryology, chambers, heart valves, surface marking, great vessels, blood, cardiac cycle, heart sounds, circulation of blood, cardiovascular responses to exercise, heart failure and compensatory mechanism, cardiac muscle action, coronary perfusion

Unit 2

Cardiovascular diseases-symptoms and signs, pulse, BP, JVP Congenital heart disease-cyanotic and acyanotic heart diseases Hypertension- essential, malignant, systemic and pulmonary hypertension Arterial diseases- atherosclerosis-risk factors, Burger`s disease

Coronary, Rheumatic heart disease, heart failure, cardiac arrhythmias, cardiomyopathies

Peripheral vascular disease, pulmonary thromboembolism,

Systemic diseases affecting the heart, pregnancy and heart disease

Pericardial diseases, Cardiac trauma. Tumors of heart

Unit 3

Prevention of diseases-diagnostic tools-ECG, Chest X-ray, ECHO, TMT, Holter

24 hour ambulatory BP monitoring blood analysis etc.,

Unit 4

Cardiac catheterization and coronary angiography-preparation of patients physically and mentally. Pre and post-operative care and rehabilitation programme. PPI

Importance of lifestyle modification measures.

Unit 5

Cardiac surgery: - Basics-Cardiopulmonary bypass-closed and open heart operation, PDA ligation, closed mitral valvotomy, pulmonary artery banding, block trussing shunt, pericardiectomy, shunt operations, ASD and VSD closure, Tetralogy of Fallot correction, valvular disease surgeries, surgery for transpositions, other corrective surgeries and coronary surgeries.

REFERANCE BOOK

1. Drugs for heart Lionel H. Opie, Bernard J. Gersh 6th Edition Elsevier Saunders
2. Clinical Recognition of Congenital Heart Disease Joseph K. Perloff MD, Ariane Marelli Perloff's 6th Edition Saunders
3. Text book of Cardio vascular Medicine – Heart Disease Braunwald 9th Edition Saunders
4. Text book of Cardiac Surgery Kirklin / Barrat- Boyes 4th edition Saunders

COURSE OUTCOMES						
CO1	To understand the basic structure of cardiovascular system					
CO2	To get knowledge about cardiovascular disease					
CO3	To understand the diagnostic tools related to cardiovascular system					
CO4	To get knowledge about coronary angiography & cardiac surgeries					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CL316	CARDIOLOGY & CARDIAC SURGERY PRACTICAL
	Total Contact Periods –60
	Total credits -4
	Course Designed by – Department of Cardiology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about Surgical instruments and their sterilization procedures

- 1 Cardiac enzyme – significance
- 2 Viral markers and their significance
- 3 Surgical instruments and their sterilization procedures
- 4 Shifting of trauma patient

5 Assisting Surgeons

Exam pattern (UE) total marks-60

1. Spotters 10 (10x2=20)
2. Charts/stations-5 (5x4=20)
3. Viva-20

REFERANCE BOOK

1. Drugs for heart Lionel H. Opie, Bernard J. Gersh 6th Edition Elsevier Saunders
2. Clinical Recognition of Congenital Heart Disease Joseph K. Perloff MD, Ariane Marelli Perloff's 6th Edition Saunders
3. Text book of Cardio vascular Medicine – Heart Disease Braunwald 9th Edition Saunders
4. Text book of Cardiac Surgery Kirklin / Barrat- Boyes 4th edition Saunders

COURSE OUTCOMES						
CO1	To get knowledge about viral markers & significance of patients					
CO2	To get knowledge about cardiovascular disease & diagnostic tools					
CO3	To get knowledge about how to assisting with surgeons					
CO4	To understand about cardiac enzymes & significance					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Cardiology & Cardiac surgery					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CT207	PHYSICIANS OFFICE MANAGEMENT
	Total Contact Periods – 60
	Total credits -4
	Course Designed by – Department of Nephrology
OBJECTIVES	•To promote scientific management of hospital and advancement of health care systems so as to make it rational, responsive and cost efficient

UNIT I. Outpatient Section

Registration of new cases, Registration of repeat cases, Patient record guide, Laboratory X-Ray reports & reports & reports filing, Alpha index typing & Filing, O.P. Records coding (disease & indexing), O.P. records retrieval, O.P. Statistics

UNIT II. Inpatient Section

Admitting office procedure, Inpatient record removal & forwarding, Ward Census,

UNIT III. Assembling & deficiency checks, I.P. record coding & indexing,

UNIT IV. Discharge Analysis

Incomplete record control, Completed record control, Medico legal procedures & issue of Medical certification, Record retention & destruction of O.P. & I.P. records,

UNIT V. Miscellaneous

Hospital reception, Secretarial practice, Library (Medical)

REFERENCE BOOKS

- Financial Management of the Medical Practice ,J. Max Reiboldt, American Medical Association
- Saunders Medical Office Management,Alice Anne Andress CCS-P CCP

COURSE OUTCOMES	
CO1	The student will be able to Understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital sectors
CO2	The student will be able to Communicate effectively and develop their leadership and teambuilding abilities

CO3	Apply modern change management and innovation management concepts to optimize structures					
CO4	The student will be to Analyze existing hospital service policies and enhance their alignment within the local and national context					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CL318	IN SERVICE TRAINING CLINICAL DEPARTMENTS ON ROTATION
	Total Contact Periods –120
	Total credits -5
	Course Designed by – Department of Obstetrics & Gynecology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge cardiology & Gynecological related health condition

1 Entering the biochemical values and their interpretation

2 Angio report typing

3 I.C.U. Protocols

4 OBG / Gynae ward

5 Blood Transfusion

Exam pattern (UE) total marks-75

1. Spotters 10 (10x3=30)

2. Charts/stations-5 (5x5=25)

REFERENCE BOOK

1. Drugs for heart Lionel H. Opie, Bernard J. Gersh 6th Edition Elsevier Saunders
2. Clinical Recognition of Congenital Heart Disease Joseph K. Perloff MD, Ariane Marelli Perloff's 6th Edition Saunders
3. Text book of Cardio vascular Medicine – Heart Disease Braunwald 9th Edition Saunders

Text book of Cardiac Surgery Kirklin / Barrat- Boyes 4th edition Saunders

COURSE OUTCOMES						
CO1	To understand how to enter biochemical values & interpretation in a patient's file					
CO2	To understand how to write/ type in an angio report in the patient's file					
CO3	To get knowledge about how to maintain I.C.U protocols & OBG/ Gynae ward.					
CO4	To demonstrate about blood transfusion					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Cardiology & Cardiac surgery					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT319	NEUROLOGY THEORY
	Total Contact Periods –60
	Total credits -4
	Course Designed by – Department of Neurology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about neurological disease condition

Unit 1

Nervous system – basics Neurotransmitters – general principles and common transmitters

Cell membrane – Physicochemical properties, permeability and support, bioelectricity

Genesis of resting membrane potential, action potential, properties of nerve-fibres

Neuromuscular junction

Muscle proteins, excitation – contraction coupling, injury and repair of nervous and muscles, work physiology

Unit 2

Sensory system – Functional organization of sensory system, perception of sensory stimuli, coding, physiology of pain.

Motor system – Functional organization of Motor system, properties of reflexes, brain stem stretch, tendon reflexes, basal ganglia cerebellum and vestibular neck reflexes, maintenance of equilibrium localizing the level of lesion in neurological diseases

Visceral and motivational system - autonomic nervous system, hypothalamus, limbic system, emotions, EEG, sleep and wakefulness, learning, memory and speech

Unit 3

Neuropathology trauma

Inflammatory disorders – pyogenic and tuberculous meningitis, brain abscess, tuberculoma

CSF and its disturbances – cerebral edema, raised intracranial pressure

Cerebrovascular disease – atherosclerosis, thrombosis, embolism, aneurysm, hypoxia, Infarction and hemorrhage

Unit 4

Neurological diseases- clinical examination of nervous system, investigations

Major manifestations – headache, facial pain, raised intracranial tension, faintness, dizziness, syncope, vertigo

Disorders of sleep and movement

Unit 5

Sensory disturbances (numbness, tingling and sensory loss) acute confusional state, coma and brain death

Aphasia and focal cerebral disorders, disturbances of brain stem, vision and sphincter

Headaches – migraine, cluster and seizures

Cerebrovascular disease – Dementia, meningitis, encephalitis, cranial nerve diseases, spinal cord diseases

tumours (primary and secondary) Peripheral neuropathies and demyelinating disorders, multiple sclerosis,

Parkinson's disease, extrapyramidal disorders, cerebellar disorders

Motor neuron disease, diseases of muscles, neurological manifestations of systemic diseases, nutritional and metabolic diseases of the nervous system

REFERENCE BOOK

1. Gelb DJ. Introduction to Clinical Neurology, 2 nd ed, Butterworth Heineman 1999.
2. Simon RP, Aminoff MJ, Greenberg DA. Clinical Neurology, 4 th ed. Lange. 1999. “An approach to neurology based on the presenting symptoms or signs, developed while teaching in the clinics and wards of the University of California, San Francisco.”
3. Weiner WJ, Goetz CG. Neurology for the Non-neurologist, 4 th ed. Lippincott, Williams & Wilkins. 1999.
4. Preston DC., Shapiro BE. Electromyography and Neuromuscular Disorders. Elsevier
5. Kimura, J. Electrodiagnosis in Diseases of Nerve and Muscle: Principles and Practice.

COURSE OUTCOMES						
CO1	To understand the basic structure and functions of nervous system					
CO2	To get knowledge about neurological disease related to clinical examination & investigations					
CO3	To get knowledge about sensory disturbance and cerebrovascular disease.					
CO4	The student able to understand about motor and sensory system					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	

2				s		M
3	M		S			
4	s			S		M
Category	Neurology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT320	NEUROLOGY PRACTICAL
	Total Contact Periods –120
	Total credits -4
	Course Designed by – Department of Neurology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about neurological disease condition

1 CT Scan / MRI

Exam pattern (UE) total marks-60

1. Spotters 10 (10x2=20)
2. Charts/stations-5 (5x4=20)
3. Viva-20

REFERENCE BOOK

1. Gelb DJ. Introduction to Clinical Neurology, 2 nd ed, Butterworth Heineman 1999.
2. Simon RP, Aminoff MJ, Greenberg DA. Clinical Neurology, 4 th ed. Lange. 1999. “An approach to neurology based on the presenting symptoms or signs, developed while teaching in the clinics and wards of the University of California, San Francisco.”

3. Weiner WJ, Goetz CG. Neurology for the Non-neurologist, 4 th ed. Lippincott, Williams & Wilkins. 1999.
4. Preston DC., Shapiro BE. Electromyography and Neuromuscular Disorders. Elsevier
5. Kimura, J. Electrodiagnosis in Diseases of Nerve and Muscle: Principles and Practice.

COURSE OUTCOMES						
CO1	To understand the basic clinical condition about neurological condition.					
CO2	To get knowledge about neurological disease related to clinical examination & investigations					
CO3	To get knowledge about diagnostic tool related neurological condition					
CO4	To demonstrate the report in CT scan & MRI scan					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Neurology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					
UAPH17CT321	NEPHROLOGY THEORY					
	Total Contact Periods –60					
	Total credits -4					
	Course Designed by – Department of Nephrology					
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about nephrological disease condition					

Unit 1

Genito-Urinary system – basics, innervations of urinary bladder in detail, microscopic structure of the kidney, Juxtaglomerular apparatus, microcirculation of kidney, Histopathology of kidney, ureters, urinary bladder and urethra

Renal haemodynamics and glomerular filtration-renal function, renal function tests micturition urine analysis

Unit 2

Glomerulonephritis – classification primary (proliferative and non – proliferative

Secondary glomerulonephritis- (SLE, purpura, polyarteritis, amyloidosis, diabetes, nephritic syndrome) Acute renal failure, progressive renal failure and end stage renal disease

Pyelonephritis, reflux nephropathy, interstitial nephritis

Unit 3

Renal and genitourinary tract tumours- renal cell carcinoma and nephroblastoma

Renal vascular disorders, kidney changes in hypertension

Unit 4

Urinary bladder-cystitis, carcinoma, urinary tract tuberculosis, urolithiasis and obstructive uropathy

Congenital abnormalities of kidneys and urinary system

Unit 5

Clinical examination of kidney and genitourinary system-symptoms, signs and investigations

Major manifestations-dysuria, pyuria, urethral symptoms

Disorders of urine volume, haematuria, proteinuria, edema

Obstruction of urinary tract, incontinence, renal involvement in systemic disorders Drugs and kidney, renal replacement therapy

REFERENCE BOOKS

1. Renal Physiology.Mc Graw-Hill John Pooler, Douglas Eaton. Vanders.
2. The Renal System.Elsevier Health Sciences Michael J. Field , Carol Pollock , David Harris .

COURSE OUTCOMES

COURSE OUTCOMES	
CO1	To understand the basic structure and function related to the kidney.

CO2	Understand the function of important physiological systems.					
CO3	To learn about regulatory function & excretory system					
CO4	To understand the concepts of disease conditions & treatment & clinical examination of kidney & genitourinary system					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Nephrology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT322	NEPHROLOGY PRACTICAL
	Total Contact Periods –120
	Total credits -4
	Course Designed by – Department of Nephrology
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about nephrological disease condition

1 Ultrasonogram

2 Dialysis

Exam pattern (UE) total marks-60

1. Spotters 10 (10x2=20)

2. Charts/stations-5 (5x4=20)

3. Viva-20

REFERENCE BOOKS

1. Renal Physiology. Mc Graw-Hill John Pooler, Douglas Eaton. Vanders.
2. The Renal System. Elsevier Health Sciences Michael J. Field , Carol Pollock , David Harris .

COURSE OUTCOMES						
CO1	To demonstrate the procedure in ultrasound					
CO2	To get knowledge about basic dialysis techniques.					
CO3	To learn about regulatory function & excretory system					
CO4	The student will be able to understand the complication in dialysis patients.					
MAPPING BETWEEN COURSE OUTCOMES & PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Nephrology					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT323	GASTROENTEROLOGY/ORTHOPAEDICS (I.E)
	Total Contact Periods –60
	Total credits -4
	Course Designed by – Department of Gastrology & Orthopaedics
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about Gastro and Ortho related disease condition.

Unit 1

Clinical Gastroenterology – basics, functions and physiology of defecation

Preventive gastroenterology- obesity, GI disorders, constipation, diarrhea and dysentery

Unit 2

Surgical asepsis and hygienic endoscopy room – preparation of sterile field – preparation of tables, equipments, instruments for the procedure, giving oral anesthetic agent, transfer and positioning of the patient, care of the room before, during and after the endoscopy procedure, special precautions in handling patients with sepsis, blood borne infection- Hepatitis B, HCV, HIV etc, cleaning and disinfection and terminal disinfection

Basic endoscopy unit- forward viewing, single channel and double channel endoscopy and specific instruments used in endoscopic and colonoscopy procedures

Unit 3

Ortho: -Basics, classification of bones of the limbs for age determination, X-rays of bones, process of repair of bone Infections-osteomyelitis, tuberculosis, mycetoma

Metabolic diseases rickets/osteomalacia, osteoporosis, hyperparathyroidism

Tumors-Primary-Osteosarcoma, osteoclastoma, Ewing's sarcoma chondrosarcoma and secondary tumours

Arthritis-Rheumatoid, osteo arthritis/ankylosing spondylitis

Unit 4

Fracture-definition, classification management, fracture clavicle, shaft of humerus and dislocation of shoulder

Classification of injuries around elbow and management of supracondylar fracture and dislocation of elbow,

Monteggia fracture dislocation and fracture of both bones of forearm, Volkamann`s ischemic contracture,

fracture lower end of radius, scaphoid and metacarpal fracture

Fracture of pelvis and dislocation of hip, fracture of neck of femur, trochanter, shaft of femur tibia, fibula and metatarsal

Unit 5

Internal derangements of knee, injuries of ankle and foot, amputations

Congenital malformations-CTEV, torticollis, CDH, pseudoarthrosis Disorders of Hip-Coxa vara, Perthes Blood transfusion

REFERENCE BOOKS

1. John DiBaise. Gastroenterology and Hepatology Board Review: Pearls of Wisdom, Third Edition
2. Isidor Segal, C Pitchumoni, Joseph Sung. Gastroenterology and Hepatology Manual.A Clinician's Guide to a Global Phenomenon

COURSE OUTCOMES						
CO1	To understand the basic functions & physiology of defecation					
CO2	To get knowledge about surgical aspect of hygiene					
CO3	To understand the different types of fracture					
CO4	The student will be able to understand about diagnostic tool.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Gastroenterology:					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CT324	IN SERVICE TRAINING CLINICAL DEPARTMENTS ON ROTATION
	Total Contact Periods –180
	Total credits -5
	Course Designed by – Department of Gastrology & Orthopaedics
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about how to manage emergency related condition and ICU patients.

1 Orthopaedic Department

2 Emergency and ICU

3 Medical Department

Exam pattern (UE) total marks-75

1. Spotters 10 (10x3=30)

2. Charts/stations-5 (5x5=25)

3. Viva-20

REFERENCE BOOKS

1. John DiBaise. Gastroenterology and Hepatology Board Review: Pearls of Wisdom, Third Edition

2. Isidor Segal, C Pitchumoni, Joseph Sung. Gastroenterology and Hepatology Manual.A Clinician's Guide to a Global Phenomenon

COURSE OUTCOMES						
CO1	To demonstrate the emergency drugs and use in causality and I.C.U					
CO2	To demonstrate the fracture cases in orthopaedic department					
CO3	To understand about ortho related clinical conditions					
CO4	The student will be able to understand about medical conditions.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M

3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAPH17CL425	INTERNSHIP
	Total Contact Periods –675
	Total credits -15
	Course Designed by – Department of Gastrology & Orthopaedics
OBJECTIVES	This course is designed to help the students to develop an understanding of basic knowledge about Facilitate Reinforcement of Training & Develop Professionalism, Communication and Team Building skills

REGULATION FOR INTERNSHIP

Internship is an important part of training wherein an Allied Health Science Graduate acquires skills, and applies his knowledge gained during his course of study.

Objectives:

1. To Facilitate Reinforcement of Training.
 2. To Develop Professionalism, Communication and Team Building skills.
 3. To help in understating of ethical Practices like
 - Rights and dignity of patients
 - Ethical Conduct and professional obligations to colleagues, patients, families and community
- ❖ The Internship is compulsory for all the candidates. It shall commence after the students have completed and passed all academic and clinical requirements.
 - ❖ The internship shall be for a duration of one year.
 - ❖ The degree shall be awarded after satisfactory completion of internship.

EVALUATION OF INTERNEES

Formative and Summative evaluation are carried out. A **Log Book** is maintained by all interneers. No Marks are allotted. Satisfactory completion of Log Book is essential for completion of internship.

Day to day assessment of the interneers during the internship posting should be done (Log Book). Summative evaluation is based on observation of the supervisors of different departments and their records in the log books.

Based on the formative and summative evaluation the head of department shall issue a certificate of satisfactory completion of training, following which the university shall award the degree.

During internship a project is allocated to each intern by the respective Heads of departments. The project work is marked for 100 (including viva).

Six credits are given for the project

30 hours per credit

Total 180 hours

The Project is done for a Maximum duration of 6 months

Internship credits

The internship is given 15 Credits. (i.e) 45 hrs / Credit. A Total of 675 hours.

After Undergoing internship for a period of Six months, each Department shall conduct an **internal evaluation** of the student to assess the skills developed and progress of the student before issuing the certificate of completeness.

The duration of the posting and skill acquisition in various technology courses are attached.

Number of Working days for interns: -

All Sundays are holidays.

On Government holidays duties are allotted on turns to the interns. In cases of leave or absence extension of posting shall be given which is done at the discretion of the Head of Department.

COMMON TO ALL BRANCHES

INTERNSHIP [VII & VIII SEMESTER]

Sl. No.	Programme	Hours Prescribed	University Examination			
			Project Evaluation	Viva	Total	Credits
1	Internship	675	-	-	-	15
2	Project	180	80	20	100	6
	No Minimum for Passing		Total Credits			

PHYSICIAN ASSISTANT

Duration of Postings General Surgery OT	- 1 month
Obstetrics & Gynaecology OT	- 1 month
ENT OT	- 15days
Orthopaedics OT	- 1 months
Urology OT	- 15days
Cardiac OT	- 15days
Neuro OT	- 15days
ICU	- 1 month

COURSE OUTCOMES						
CO1	The student will be able to understand practice speciality					
CO2	The student will be able to develop knowledge about surgical instrument					
CO3	To understand about ortho related clinical conditions					
CO4	The student will be able to understand about medical conditions.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

PROGRAMME ELECTIVE

PROGRAMME ELECTIVE							
SI NO	SE ME STE R	COURSE		TEACHING HOURS			CREDITS
		COURSE CODE	COURSE TITLE	L	T	P	
1	I	UAH17CE10 20	Fundamentals of Biostatistics	4	4		2
2	I	UAH17CE10 21	Communication skills for Health Care professionals	5	5		2
3	II	UAH17CE10 22	Biomedical Ethics	3	3		2
4	II	UAH17CE10 23	Fundamentals of Human Genetics	4	4		2
5	III	UAH17CE20 24	Principles and application of Clinical Genetics	6	4	2	2
6	III	UAH17CE20 25	Clinical Examination of the Human Visual System	5	3	2	2
7	IV	UAH17CE20 26	Personality Development and Stress Management	4	4		2
8	IV	UAH17CE20 27	First Aid Management & Splinting Techniques	6	4	2	2
9	V	UAH17CE30 28	Essentials of Medical Transcription	7	7		2
10	V	UAH17CE30 29	Communication and Soft Skill	7	7		2
11	VI	UAH17CE30 30	Professional skills Development	6	6		2
12	VI	UAH17CE30 31	Library Science and E-Resources	6	6		2

UAH17CE1020	FUNDAMENTALS OF BIostatISTICS
	Total Contact Periods – 4
	Total credits -2
	Course Designed by – Department of Community Medicine
OBJECTIVES	The course will offer basic knowledge about Biostatistics and to correctly apply a variety of statistical procedures and tests according to objective of study

UNIT I: Introducing the Basics

Introduction, Graphical representation of data, Data collection, Diagrammatic and Graphical Presentation of data, Types of data, limitations.

UNIT II: Measures of Central Tendency & Dispersion

Measures of Central Tendency; Mean, Median, Mode, Geometric mean, Harmonic mean for raw data. Measures of dispersion; Quartile deviation, Mean Deviation - Standard Deviation - Coefficient of variation- Range

UNIT III: Probability

Introduction to Probability, Theorems of probability; Bayer's Theorem, Probability Distributions; Discrete & Continuous distributions, Binomial Distribution, Poisson Distribution, Normal Distribution.

UNIT IV: Correlation & Regression Analysis

Correlation Analysis, Types of correlation; Rank Correlation Coefficient. Regression analysis, Types of Regression, Assumptions; Comparison to Correlation.

UNIT V: Hypothesis Testing

Introduction; Types of sampling, Hypothesis testing; Type of errors, Parametric & Non-parametric tests; Mann Whitney's U test, Chi-square, t-tests, ANOVA.

REFERENCES

1. Don. Mc Neil - Epidemiological Research Methods - Oxford University Press, London.
2. Biostatistics –Principle & Practice – McGraw Hill Education.
3. <http://www.ats.ucla.edu/stat/>
4. <http://www.statsoft.com/textbook/basic-statistics/>

COURSE OUTCOMES						
CO1	The student will be able to understand and apply the Biostatistics.					
CO2	The student will be able to use the software independently for the data analysis.					
CO3	The student will be able determine the correct procedures to use in a given situation					
CO4	The student will be able to interpret the results of hypothesis tests					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Management					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE1021	COMMUNICATION SKILLS FOR HEALTH CARE PROFESSIONALS
	Total Contact Periods – 5
	Total credits -2
	Course Designed by – Department of Community Medicine
OBJECTIVES	This course deals with essential functional English aspects of the of communication skills essential for the health care professionals.

UNIT: I APPLIED GRAMMAR

Identifying common errors in sentences, Transformation of sentences, Usage of either ...or..., Neither... nor..., So... that..., Such... that..., Not only... but also..., unless...

UNIT: II VOCABULARY

Abbreviations used in healthcare, Medical idioms & Phrases

UNIT: III WRITING

Letter writing, Curriculum Vitae writing, covering letter, Creative writing – invite, posters, Essay writing, summary writing, note taking, report writing.

UNIT: IV SPOKEN COMMUNICATION

Telephone etiquette, Importance of Stress, Intonation and rhythm, speaking; describing simple process, Filling a form etc., - Asking and answering questions; Debate/Oral Reporting

UNIT: V LISTENING AND READING SKILLS:

Listening and reading comprehension exercises.

Textbook Recommended:

1. Effective English Communication by Krishna Mohan and Meenakshi Raman, Tata Mc Graw –Hill Publishing Company Limited, New Delhi.
2. English for Colleges and Competitive Exams by Dr. R. Dyvadatham, Emerald Publishers.

COURSE OUTCOMES						
CO1	The student will be able to express better.					
CO2	The student will be able to get knowledge about MOA, adverse effects					
CO3	The student will Grow personally and professionally					
CO4	The student will Develop confidence in every field					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

	BIOMEDICAL ETHICS
UAH17CE1022	Total Contact Periods – 3
	Total credits -2
	Course Designed by – Department of Community Medicine
OBJECTIVES	To provide basic skills in: A) Approaching ethical issues. B) Analysis and statement of issues. C) Understanding the relevant ethical principles invoked..

Introduction to Bioethics

Bioethical issues related to Healthcare & Medicine 5

2Anatomy - Cadaver ethics, Human dignity, PNDT, Disposal of cadaver, Genetic Counseling 7

Physiology - Animal ethics, Health policy privacy 7

Biochemistry & Pathology - Prudence of investigation confidentiality, Patients bill of rights,

Disposal of investigative material, Integrity, Blood transfusion 5

Pharmacology - Rational drug prescribing, Clinical trials, Risk minimization, Animal ethics

Microbiology - Hand wash, Drug resistance minimization, Prudence of investigation confidentiality, Sterilization procedure, Biosafety and bio hazard 5

Medicolegal aspects of medical records

Introduction to Intellectual Property:

Concept of Intellectual Property Kinds of Intellectual Property

Patents, Copyrights Designs, Trademarks, Geographical Indication, Infringement of IPR, Its protection and Remedies Licensing and its types

REFERENCE BOOKS

1. Contemporary issues in bioethics – Beauchamp & Walters (B&W) 4th edition.
2. Classic philosophical questions by Glou (8th Edition)
3. Case book series and booklets by UNESCO Bioethics Core curriculum 2008
4. Encyclopedia of Bioethics 5 vol set, (2003) ISBN-10: 0028657748
5. Intellectual property rights- Ganguli-Tat McGrawhill. (2001) ISBN-10: 0074638602,
6. Intellectual Property Right- Wattal- Oxford Publication House.(1997) ISBN:0195905024

COURSE OUTCOMES	
CO1	The students will be able to: Recognize what constitutes an ethical concern in health care
CO2	The student will be able to understand the clinical evaluations of Disease Condition
CO3	The student will be able to Understand better the complexity and multi-dimensionality of medical ethical concerns and uniqueness of each problem.

CO4	The student will get the knowledge of plagiarism in their innovations which can be questioned legally					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE1023	FUNDAMENTALS OF HUMAN GENETICS
	Total Contact Periods – 4
	Total credits -2
	Course Designed by – Department of Genetics
OBJECTIVES	To Comprehend the Chromosomal basis of inheritance

I - Introduction to cellular components

Structure and morphology of various types of cells - Biochemical composition - Cellular organelles - Composition and components of nucleus - Chromosomes - Cell division and Mechanics of cell division and regulation.

II - Structure and functions of nucleic acids

Functions, Structure and characteristics of nucleic acids - Types of mutations -Genetic variations and polymorphisms

III - Chromosomal basis of inheritance

Chromosome behavior and inheritance pattern in man - Single gene Mendelian disorders: autosomal dominant, recessive, sex linked dominant and recessive - Polygenic and mitochondrial inheritance.

III - Origin and detection of genetic disorders

Mutation - Non-disjunction - Chromosomal abnormalities and clinical phenotypes of common genetic syndromes (Down's syndrome, Patua's syndrome, Edward syndrome, Turner syndrome and Klinefelter's syndrome, Cri-du-caht syndrome)- Karyotyping, Neural tube defects, Carcinogenesis.

IV-Biochemical basis for the inborn errors of metabolism

General characteristics of inborn errors of metabolism – Incidence - etiology - Folic acid metabolism - triple markers - New born screening, prevention and management. False positive and false negative -Ethical principles of Genetic counseling for prenatal diagnosis - Fetal rights – Regulation and prevention of misuse act 1994.

REFERENCE BOOKS

1. A guide to genetic counseling, 2nd edition, D.L. Baker, J.L. Schuette and W.R. Uhlmann, Wiley –Leiss Publications 2002.
2. Emery Elements of Medical Genetics, 9th edition, Robert F. Mueller & Ian D. young, Churchill Livingstone, 1995.
3. Medical Genetics, 3rd edition, Lynn B. Jorde, John C. Carey, Michael J. Bamshad, & Raymond L. White, Mosby, 2003.

COURSE OUTCOMES	
CO1	The student will be able to Be able to describe the chromosomal basis of inheritance and how alterations in chromosome number or structure..
CO2	The student will be able to understand of the differences and similarities between diagnostic, predictive and carrier genetic testing.

CO3	The student will be able to know detailed information of Chromosome behavior and inheritance pattern in man					
CO4	The student will be to understand the phenotype and genotype.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE2024	PRINCIPLES AND APPLICATION OF CLINICAL GENETICS
	Total Contact Periods – 6
	Total credits -2
	Course Designed by – Department of Nephrology
OBJECTIVES	To develop awareness about Genetic testing, Genetic counseling, Philosophy and Ethos of Genetic services

I -Principle and components of genetic testing Lay out of genetic laboratories - Genetic testing, Genetic counseling, Philosophy and Ethos of Genetic services, Types of testing- Cytogenetic testing- Molecular cytogenetic testing- DNA testing.

II - Cytogenetic Testing Indications, Type of sample, Sampling and transport conditions, Karyotyping - chromosome identification, merits and demerits of conventional cytogenetic testing

III - Molecular Cytogenetic testing

Indications, Type of sample, Sampling and transport conditions - Fluorescence in-situ hybridization, fluorescence signal enumeration, merits and demerits of FISH.

IV - DNA testing

Organization of human genome, Structure and function of genetic material, Polymerases chain reaction - Types, principles and testing, Sequencing.

V - Practical:

Case studies

Reference books

1. Practical Genetic counseling, Peter S. Harper, 6th edition, Hodder Headline Group 2004.
2. Medical Genetics, 3rd edition, Lynn B. Jorde, John C. Carey, Michael J. Bamshad, & Raymond L. White, Mosby, 2006.
3. Genetics in Medicine, Thompson & Thompson, 6th edition, Elsevier 2004.
4. Practical Genetic counseling, Peter S. Harper, 6th edition, Hodder Headline Group 2004.

COURSE OUTCOMES						
CO1	The student will be able to become familiar with and practice genetic tests.					
CO2	The student will be able to provide better patient care					
CO3	The student will be able to know detailed information about Genetic Counselling					
CO4	The student will be to know about Genetic testing.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE2025	CLINICAL EXAMINATION OF THE HUMAN VISUAL SYSTEM
	Total Contact Periods – 5
	Total credits -2
	Course Designed by – Department of Ophthalmology
OBJECTIVES	The core objective of this course is to gain in depth knowledge on the structural and physiological functions of the various parts of the eye and the different examination procedures for the ocular structures.

: I - History Taking

Importance of history taking, Demographic data and its importance, Chief presenting symptoms, History of present illness, History of past illness, Family History, Common ocular symptoms and their causes – defective vision, watering eyes, discharge, redness, pain, asthenopia and other symptoms

II - Visual Acuity measurement

Distance visual acuity-charts, methods and measurements; Near visual acuity –charts, methods and measurements; contrast sensitivity testing; colour vision testing

III - External Examination

Examination of head posture, examination of forehead, examination of eye brows, examination of eyelids, examination of Lacrimal apparatus, examination of eyeball on the whole, examination of the cornea, conjunctiva sclera and anterior chamber, eye movements, muscle balance and squint evaluation

IV - Anterior segment Evaluation

Slit lamp examination of the eyelids, cornea, conjunctiva, anterior chamber depth, iris, and lens Intraocular pressure measurements using non contact tonometer

V - Posterior segment Evaluation

Introduction and importance of posterior segment evaluation- direct and indirect ophthalmoscopy

REFERENCE BOOKS:

1. Comprehensive Ophthalmology – A K Khurana, 5th edition, New Age International Publishers, 2012.
2. Clinical Ophthalmology – Jack J Kanski, 7th edition, Butterworths, 2012
1. Borish's Clinical Refraction - William J. Benjamin, Irvin M. Borish, Butterworth-Heinemann, 2006

COURSE OUTCOMES						
CO1	The student will be able to have the skill to perform basic ophthalmic examination					
CO2	The student will be able to understand concept of theory and clinical evaluation of disease conditions gain an in- depth knowledge on disease outline and clinical evaluation of patients					
CO3	The student will be able to depth knowledge on the functions of the visual system					
CO4	The student will have the skill to perform basic ophthalmic examination					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE2026	PERSONALITY DEVELOPMENT AND STRESS MANAGEMENT
	Total Contact Periods – 4
	Total credits -2
	Course Designed by – Department of HR
OBJECTIVES	To Explain the effect of personality, attitudes, perceptions and attributions on Health stress, coping and relaxation.

Unit 1

Introduction to Personality Development, Different Stages of Development, Types of personalities, personality perspectives and theories

Unit 2

How needs impact personality, Maslow's hierarchy of need, Basic Personality Traits; Values, Beliefs, Interactions, Experiences, Environmental influences, the big five dimensions.

Unit 3

Stress; causes, effect and types, Stress resistant personalities, Relaxation; training aspects importance and Body works.

Unit 4

Health stress and coping, Understanding and communicating our health needs, Behavioral and psychological correlates of illness.

Unit 5

Soft skill; need and importance, Personality development and soft skills. Effective communication, listening, speaking, writing, interpretation part of soft skills and personality

Learning Outcome:

By successfully completing this course, students will be able to Describe how a personality develops.

- Define the stages of personality development.
- Define personality types.

- Describe basic personality traits.
- Personality and stress.
- Health stress, coping and relaxation.
- Soft skills and personality.

Text Books:

1. Hurlock (1976). Personality development. Tata McGraw Hill.
2. Baron R A, Psychology 5th edition, Pearsons publication.
3. Abraham A, General Psychology, Tata Mc Graw hill Education private limited.

Reference Books:

1. Lazarus J Stress Relief and Relaxation Techniques, Viva Book Private limited.
2. Shelly E. Taylor, Health psychology, 7th edition, TATA McGrawHil, New Delhi.

COURSE OUTCOMES						
CO1	The student will be able to Define the stages of personality development.					
CO2	The student will be able to Describe basic personality traits.					
CO3	The student will be able to Describe how a personality develops- Personality and stress.					
CO4	The student will be able to Develop the Soft skills and personality.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Management					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE2027	FIRST AID MANAGEMENT & SPLINTING TECHNIQUES
	Total Contact Periods – 6
	Total credits -2
	Course Designed by – Department of Medicine
OBJECTIVES	Students will gain additional skills in interventional procedures and Differentiate between emergency situation and other use.

Unit-I BACKGROUND INFORMATION

- The importance of first Aid
- First aid supplies
- First aid and the law
- Prevention practices

Unit-II ACTION AT AN EMERGENCY

- Recognizing Emergencies
- Deciding to act
- Seeking medical care
- Disease transmission
- Rescuer reactions

Unit –III BLEEDING AND WOUNDS

- External bleeding
- Wound infection
- Amputations
- Impaled objects
- Wound that require medical care
- Internal Bleeding
- Dressing and Bandages

Unit-IV BONE, JOINT AND MUSCLE INJURIES

- Bone injuries
- Splinting
- Joint injuries
- RICE injuries
- Muscle injuries
- Splints – Introduction, Types, Uses, Splinting guidelines, Slings, Procedure, Complications

UNIT-V RESCUING AND MOVING INJURIES

- Water rescue
- Ice rescue
- Electrical Emergency Rescue
- Hazardous materials incidents
- Motor Vehicle crashes
- Fires
- Confined spaces
- Triage – what to do with multiple victims
- Moving victims

Text books:

1. First Aid CPR and AED standard (sixth edition)
2. First aid book-St Johns Ambulance services
3. Text book of Orthopaedics – Natarajan
4. Text book of Orthopaedics – John Ebenezer Reference books: First Aid and Management of Minor Injuries by Jon Dallimore First Aid and Beyond by Dan Wolfe - Smashwords , 2014 International Trauma Life Support Provider Manual Essentials Orthopaedics Mark D Mille

COURSE OUTCOMES						
CO1	The student will be able to Differentiate between emergency situation and other use.					
CO2	The student will be able to know about the basics of concepts of disease & outlines of clinical evaluation.					
CO3	The student will be able to List management, assessment, and care steps for upper extremity and lower extremity fractures.					
CO4	The student will be to know Splinting techniques of lower extremities –Thomas splint, sam splint, etc					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE3028	ESSENTIALS OF MEDICAL TRANSCRIPTION
	Total Contact Periods – 7
	Total credits -2
	Course Designed by – Department of MRD
OBJECTIVES	Provide Hands on training on English Language and listening comprehension and provide foundation to learn medical terminology & learn laboratory report

Unit 1

The Medical Transcriptionist ‘s career including Ethical& Legal Responsibilities Introduction to Medical transcription, Job Opportunities, Transcription Skills, Medical records, Certification for Medical Transcriptionists, Ethical and Legal responsibilities

Unit 2

Equipments in Transcription Equipment, Computer Systems, Ergonomics, Dictation Equipments, Hand and Foot Control Dictation, Transcription Preparation

Unit 3

Transcription Guidelines Punctuations, Proof reading notations, Formats and styles, SOAP for Chart notes; Discharge Summary

Unit 4 PRACTICAL:

1. Equipments for Medical Transcription, 2. Typing for the beginners, 3. Vocabulary, 4. Proof reading Notations, 5. Formats and styles in document preparation, 6. Preparation of chart notes, 7. Listening Comprehension, 8. Transcription check off sheet

REFERENCES BOOKS:

1. Medical Key boarding, Typing, and Transcribing Techniques and procedures 4th Edition, March Otis Diehl, Marilyn Takahashi Fordney, W.B. Saunders Company
2. The AAMT Book of Style for Medical Transcription, Claudia J. Tessier
3. CD's available for:
 - a. Stedman's Electronic Medical Dictionary 4.0
 - b. American Drug Index 2003

Text Books:

1. Medical Key boarding, Typing, and Transcribing Techniques and procedures 4th Edition, March Otis Diehl, Marilyn Takahashi Fordney, W.B. Saunders Company
2. The AAMT Book of Style for Medical Transcription, Claudia J. Tessier

COURSE OUTCOMES	
CO1	The student will be able to Demonstrate their basic skills in the knowledge of Vocabulary, Medical terminology
CO2	The student will be able to Demonstrate their basic skills in the preparation of chart notes.

CO3	The student will be able to Demonstrate skills in listening comprehension					
CO4	The student will be Be able to identify accurate format for medical document preparation					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Medical Records					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE3029	COMMUNICATION AND SOFT SKILL
	Total Contact Periods – 7
	Total credits -2
	Course Designed by – Department of Human Resources
OBJECTIVES	This course is designed to equip the students with essential soft skills needed for workplace and improve personality.

LEARNING OUTCOME:

This course is designed to help the students to

- Foster healthy attitude.
- Develop effective inter and intra personal skills to be an effective team worker.
- Communicate effectively in both academic and professional setup

UNIT: I ASPECTS OF COMMUNICATION

Importance of communication, Process, Barriers, Non verbal Communication

UNIT: II SPEAKING

How to Open and Close conversations, Introductions and Address System, Expressing Courtesy, Giving Compliments and replying to Compliments, Presentation Skills, Telephonic conversation and telephone etiquette

UNIT – III PRESCRIBED READING

Tom Sawyer by Mark Twain, Bacon's Essays: - Of Goodness and goodness of nature

UNIT – IV WRITING

Letter writing - Letter of Complaints, Inviting and Declining an invitation, Writing Memos and Emails, Grammar, Spelling & Punctuation, Use of Dictionary & Thesaurus.

UNIT – V SOFT SKILLS

Active Listening Skills, Assertive Skills, Negotiation and Persuasive Skills, Interview Skills

Text Book:

Developing Communication Skills by Krishna Mohan and Meera Banerji, II edition, Macmillan.

Reference Books:

1. Communication Skills for Engineers and Scientists by Sangeeta Sharma and Binod Mishra, PHI Learning Private Limited, New Delhi.
2. English and soft skills by S.P. Dhanavel, Orient Black Swan
3. Effective English Communication by Krishna Mohan and Meenakshi Raman, Tata McGraw –Hill Publishing Company Limited.
4. Technical Communication – Principles and Practice, by Meenakshi Raman and Sangeetha Sharma, II edition, Oxford University Press.
5. Developing Communication Skills by Krishna Mohan and Meera Banerji, II edition, Macmillan.

6. The Complete Guide to Functional Writing in English by M. Sarada, Sterling Publishers (P) Ltd., New Delhi.

7. Speaking Naturally: Communication Skills in American English by Bruce Tillitt and Mary Newton Bruder, Cambridge University Press .

COURSE OUTCOMES						
CO1	The student will be able to Foster healthy attitude					
CO2	The student will be able to develop effective inter and intra personal skills to be an effective team worker					
CO3	The student will be able to Develop effective inter and intra personal skills to be an effective team worker					
CO4	The student will be able to Communicate effectively in both academic and professional setup					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE3030	PROFESSIONAL SKILLS DEVELOPMENT
	Total Contact Periods – 6
	Total credits -2
	Course Designed by – Department of Human Resources
OBJECTIVES	To Advance the students' intellectual curiosity, competency and skills in preparation for employment

1. Communication Skills

Importance of Communication skills in Public health; Communication process; Methods of communication; Types of communication: Verbal and Non-verbal; Impediments to effective communication; Feedback

2. Oral Presentation Skills:

Preparation and planning; Structure; Audio-visual aids; Creating interest and establishing a relationship with the audience; Body language; Voice and pronunciation; Review

3. Writing skills:

Writing a scientific paper; Writing a proposal; Structure of an article; References and literature review; Peer-review process-Publication bias; International guidelines for publication in journals; Professional Ethics

4. Leadership in Public health:

Leadership styles and trait; Motivation skills; Interpersonal communication skills; Problem solving skills; Decision making skills; Management skills; Communication Skills

5. Manuscript writing

Writing introduction, objectives, methodologies, major finding, discussion, conclusion and recommendation

6. Seminar presentations

Use of computers present data and information on recent topics

Text Books:

1. Professional Writing Skills, A self paced training programme by Janis Fisher Chan and Diane Lutovich. Advanced Communication Designs Inc, 2003. San Anselmo, CA. ISBN 0963745549
2. Speaking Your Mind: Oral Presentation and Seminar Skills By Rebecca Stott, Tory Young, Cordelia Bryan Contributor Rebecca Stott, Tory Young, Cordelia Bryan Published by Longman, 2001 ISBN 0582382432, 9780582382435
3. Public Health Leadership: Putting Principles into Practice Louis Rowitz, PhD. Jones and Bartlett Publishers, 2003. ISBN-13: 9780763725013 ISBN-10: 0763725013

COURSE OUTCOMES						
CO1	The student will be able to Develop good written and oral communication abilities					
CO2	The student will be able to Develop an understanding of team building and leadership skills.					
CO3	The student will be able to Develop knowledge regarding capacities needed to work independently within diverse work environments					
CO4	The student will be able to know how to maintain Records and Reports and demonstrate the procedure.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

UAH17CE3031	LIBRARY SCIENCE AND E-RESOURCES
	Total Contact Periods – 6
	Total credits -2
	Course Designed by – Department of Library science
OBJECTIVES	To gain knowledge about Documentary Sources of Information and Library Automation

Unit 1 BASIC CONCEPTS AND INFORMATION SERVICES

Meaning of Library – Types of Library – Library layout - Functions of Library – need for Library – Meaning of ISBN and ISSN – Collection management - Library Classification system - Five laws of Library Science – Inter Library Loan (ILL), Communication theories and models. Barriers to communication. Levels of

communications – Intrapersonal, interpersonal and mass communication. Information services – literature search Methods of Dissemination of information Current Awareness Service (CAS), Selective Dissemination of Information (SDI), Document delivery service, Alert services, and Internet services.

Unit 2 INFORMATION SOURCES

Documentary Sources of Information, Print, and Non-print including Electronic, Human and Institutional sources: Nature, types, characteristics and utility. Internet as a source of Information. Primary sources of information – Journal, conference volume, patents, research reports, thesis and their electronic format – Secondary sources of information - Bibliography, Encyclopedia Dictionary, Yearbook, Directory, Geographical Source, Textbook, Index and Abstracts.

Unit 3 LIBRARY AUTOMATION

Definition need, Purpose, advantages. Planning for Library automation. Automation of Library operations - Acquisitions, Cataloguing, OPAC, Circulation and Serials control. Evaluation of Library automation systems - Application of Barcode and RFID Technology for Library Functions. Basic concepts: Bibliography, bibliographic coupling, Impact factor.

Unit 4 ELECTRONIC INFORMATION SOURCES

Electronic Information resources: Meaning and definition, Growth and development, Types. EJournals, e-Books, e-Theses, e-newspapers, Blogs, Wikis. Free databases and fee based bibliographical and full text databases, subject related websites, Institutional repositories, Open Archives and digital Libraries. - Resource Sharing and Networks: Consortia- Importance and objectives. Study of Information networks and Digital Library Consortia. Types of computer networks: Local Area Networks – Concept, Topologies - Bus, Star, Mesh, Tree, and Ring). Wide Area Networks and Metropolitan Area Networks- Concepts, Circuit switching and Packet switching. Difference between LAN and WAN. Wireless Networks –Mobile telephones.

Unit 5 DIGITAL LIBRARIES

Digital Libraries: Concepts and issues. Understanding digital Libraries Content creation –Electronic documents, files and file formats. Study of different file formats. Studying PDF in detail- features of PDF. Digitization-scanning, Digital Preservation, Conservation and Archival Management – Problems and prospects. Open Access Movement and Institutional repositories.

TEXTBOOKS

1. Ranganathan, S.R The five Laws of Library Science UBS Publishers, 1988.
2. Ranganathan, S.R. Library Manual Sarada Ranganathan endowment for Library Science, 1989.
3. Ranganathan, S.R. Cataloguing Practice Sarada Ranganathan endowment for Library Science 1990

COURSE OUTCOMES						
CO1	The student will be able to analyze and understand the query					
CO2	The student will be able to Identify the sources of information					
CO3	The student will be able to Find out the information					
CO4	The student will be able to know how to maintain Records and Reports and demonstrate the procedure.					
MAPPING BETWEEN COURSE OUTCOMES& PROGRAMME OUTCOMES						
COs\POs	a	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S			
4	s			S		M
Category	Library Science					
Approval	47 th Meeting of Academic Council held in Aug, 2018					

PROGRAMME ELECTIVE

PROGRAMME ELECTIVE							
		COURSE		TEACHING HOURS			
SI NO	SE ME STE R	COURSE CODE	COURSE TITLE	L	T	P	CREDITS
1	I	UAH19CE1020	Fundamentals of Biostatistics	4	4		2
2	I	UAH19CE1021	Communication skills for Health Care professionals	5	5		2
3	II	UAH19CE1022	Biomedical Ethics	3	3		2
4	II	UAH19CE1023	Fundamentals of Human Genetics	4	4		2
5	III	UAH19CE2024	Principles and application of Clinical Genetics	6	4	2	2
6	III	UAH19CE2025	Clinical Examination of the Human Visual System	5	3	2	2
7	IV	UAH19CE2026	Personality Development and Stress Management	4	4		2
8	IV	UAH19CE2027	First Aid Management & Splinting Techniques	6	4	2	2
9	V	UAH19CE3028	Essentials of Medical Transcription	7	7		2
10	V	UAH19CE3029	Communication and Soft Skill	7	7		2
11	VI	UAH19CE3030	Professional skills Development	6	6		2
12	VI	UAH19CE3031	Library Science and E-Resources	6	6		2

UAH19CE1020	FUNDAMENTALS OF BIOSTATISTICS
	Total Contact Periods–4
	Total credits -2
	Course Designed by–Department of Community Medicine
OBJECTIVES	The course will offer basic knowledge about Biostatistics and to correctly apply a variety of statistical procedures and tests according to objective of study

UNIT I: Introducing the Basics

Introduction, Graphical representation of data, Data collection, Diagrammatic and Graphical Presentation of data, Types of data, limitations.

UNIT II: Measures of Central Tendency & Dispersion

Measures of Central Tendency; Mean, Median, Mode, Geometric mean, Harmonic mean for raw data. Measures of dispersion; Quartile deviation, Mean Deviation - Standard Deviation - Coefficient of variation- Range

UNIT III: Probability

Introduction to Probability, Theorems of probability; Bayer's Theorem, Probability Distributions; Discrete & Continuous distributions, Binomial Distribution, Poisson Distribution, Normal Distribution.

UNIT IV: Correlation & Regression Analysis

Correlation Analysis, Types of correlation; Rank Correlation Coefficient. Regression analysis, Types of Regression, Assumptions; Comparison to Correlation.

UNIT V: Hypothesis Testing

Introduction; Types of sampling, Hypothesis testing; Type of errors, Parametric & Non-parametric tests; Mann Whitney's U test, Chi-square, t-tests, ANOVA.

REFERENCES

1. Don. Mc Neil - Epidemiological Research Methods - Oxford University Press, London.
2. Biostatistics –Principle & Practice – McGraw Hill Education.
3. <http://www.ats.ucla.edu/stat/>
4. <http://www.statsoft.com/textbook/basic-statistics/>

COURSEOUTCOMES							
CO1	The student will be able to understand and apply the Biostatistics.						
CO2	The student will be able to use the software independently for the data analysis.						
CO3	The student will be able determine the correct procedures to use in a given situation						
CO4	The student will be able to interpret the results of hypothesis tests						
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES							
COs\Pos		A	b	c	d	e	f
1		S		M		s	
2					s		M
3		M		S			
4		S			S		M
Category		Management					
Approval		46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE1021	COMMUNICATION SKILLS FOR HEALTH CARE PROFESSIONALS
	TotalContactPeriods–5
	Total credits -2
	Course Designed by–Department of Community Medicine
OBJECTIVES	This course deals with essential functional English aspects of the of communication skills essential for the health care professionals.

UNIT: I APPLIED GRAMMAR

Identifying common errors in sentences, Transformation of sentences, Usage of either ...or..., Neither... nor..., So... that..., Such... that..., Not only... but also..., unless...

UNIT: II VOCABULARY

Abbreviations used in healthcare, Medical idioms & Phrases

UNIT: III WRITING

Letter writing, Curriculum Vitae writing, covering letter, Creative writing – invite, posters, Essay writing, summary writing, note taking, report writing.

UNIT: IV SPOKEN COMMUNICATION

Telephone etiquette, Importance of Stress, Intonation and rhythm, speaking; describing simple process, Filling a form etc., - Asking and answering questions; Debate/Oral Reporting

UNIT: V LISTENING AND READING SKILLS:

Listening and reading comprehension exercises.

Textbook Recommended:

1. Effective English Communication by Krishna Mohan and Meenakshi Raman, Tata McGraw –Hill Publishing Company Limited, New Delhi.
2. English for Colleges and Competitive Exams by Dr. R. Dyvadatham, Emerald Publishers.

COURSEOUTCOMES						
CO1	The student will be able to express better.					
CO2	The student will be able to get knowledge about MOA, adverse effects					
CO3	The student will Grow personally and professionally					
CO4	The student will Develop confidence in every field					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	b	c	d	e	f
1	S		M		s	
2				s		M
3	M		S		S	
4	S			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE1022	BIOMEDICAL ETHICS
	TotalContactPeriods-3
	Total credits -2
	Course Designed by-Department of Community Medicine
OBJECTIVES	To provide basic skills in: A) Approaching ethical issues. B) Analysis and statement of issues. C) Understanding the relevant ethical principles invoked..

Introduction to Bioethics

Bioethical issues related to Healthcare & Medicine 5

2Anatomy - Cadaver ethics, Human dignity, PNDT, Disposal of cadaver, Genetic Counseling
7

Physiology - Animal ethics, Health policy privacy 7

Biochemistry & Pathology - Prudence of investigation confidentiality, Patients bill of rights,
Disposal of investigative material, Integrity, Blood transfusion 5

Pharmacology - Rational drug prescribing, Clinical trials, Risk minimization, Animal
ethics

Microbiology - Hand wash, Drug resistance minimization, Prudence of investigation
confidentiality, Sterilization procedure, Bio safety and bio hazard 5

Medicolegal aspects of medical records

Introduction to Intellectual Property:

Concept of Intellectual Property Kinds of Intellectual Property

Patents, Copyrights Designs, Trademarks, Geographical Indication, Infringement of IPR, Its
protection and

Remedies Licensing and its types

REFERENCE BOOKS

1. Contemporary issues in bioethics – Beauchamp & Walters (B&W) 4th edition.
2. Classic philosophical questions by Glou (8th Edition)
3. Case book series and booklets by UNESCO Bioethics Core curriculum 2008
4. Encyclopedia of Bioethics 5 vol set, (2003) ISBN-10: 0028657748
5. Intellectual property rights- Ganguli-Tat McGrawhill. (2001) ISBN-10: 0074638602,
6. Intellectual Property Right- Wattal- Oxford Publications House.(1997) ISBN:0195905024.

COURSEOUTCOMES						
CO1	The students will be able to: Recognize what constitutes an ethical concern in health care					
CO2	The student will be able to understand the clinical evaluations of Disease Condition					
CO3	The student will be able to Understand better the complexity and multi-dimensionality of medical ethical concerns and uniqueness of each problem.					
CO4	The student will get the knowledge of plagiarism in their innovations which can be questioned legally					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	d	E	f
1	S		M		S	S
2				s		
3			S			
4	S		M			M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE1023	FUNDAMENTALS OF HUMAN GENETICS
	Total Contact Periods– 4
	Total credits -2
	Course Designed by–Department of Genetics
OBJECTIVES	To Comprehend the Chromosomal basis of inheritance

I -Introduction to cellular components

Structure and morphology of various types of cells - Biochemical composition - Cellular organelles -Composition and components of nucleus - Chromosomes - Cell division and Mechanics of cell division and regulation.

II - Structure and functions of nucleic acids

Functions, Structure and characteristics of nucleic acids - Types of mutations -Genetic variations and polymorphisms

III - Chromosomal basis of inheritance

Chromosome behavior and inheritance pattern in man - Single gene Mendelian disorders: autosomal dominant, recessive, sex linked dominant and recessive - Polygenic and mitochondrial inheritance.

III - Origin and detection of genetic disorders

Mutation - Non-disjunction - Chromosomal abnormalities and clinical phenotypes of common genetic syndromes (Down's syndrome, Patua's syndrome, Edward syndrome, Turner syndrome and Klinefelter's syndrome, Cri-du-caht syndrome)- Karyotyping, Neural tube defects, Carcinogenesis.

IV–Biochemical basis for the inborn errors of metabolism

General characteristics of inborn errors of metabolism – Incidence - etiology - Folic acid metabolism - triple markers - New born screening, prevention and management. False positive and false negative -Ethical principles of Genetic counseling for prenatal diagnosis - Fetal rights – Regulation and prevention of misuse act 1994.

Reference books

1. A guide to genetic counseling, 2nd edition, D.L. Baker, J.L. Schuette and W.R. Uhlmann, Wiley –Leiss Publications 2002.
2. Emery Elements of Medical Genetics, 9th edition, Robert F. Mueller & Ian D. young, Churchill Livingstone, 1995.
3. Medical Genetics, 3rd edition, Lynn B. Jorde, John C. Carey, Michael J. Bamshad, & Raymond L. White, Mosby, 2003.

COURSEOUTCOMES						
CO1	The student will be able to Be able to describe the chromosomal basis of inheritance and how alterations in chromosome number or structure.					
CO2	The student will be able to understand of the differences and similarities between diagnostic, predictive and carrier genetic testing.					
CO3	The student will be able to know detailed information of Chromosome behavior and inheritance pattern in man					
CO4	The student will be to understand the phenotype and genotype .					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	d	E	f
1	S		M		S	
2				s		M
3			M			
4	S			S		S
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE2024	PRINCIPLES AND APPLICATION OF CLINICAL GENETICS
	Total Contact Periods– 6
	Total credits -2
	Course Designed by–Department of Nephrology
OBJECTIVES	To develop awareness about Genetic testing, Genetic counseling, Philosophy and Ethos of Genetic services

I -Principle and components of genetic testing Lay out of genetic laboratories - Genetic testing, Genetic counseling, Philosophy and Ethos of Genetic services, Types of testing- Cytogenetic testing- Molecular cytogenetic testing- DNA testing.

II - Cytogenetic testing Indications, Type of sample, Sampling and transport conditions, Karyotyping - chromosome identification, merits and demerits of conventional cytogenetic testing

III - Molecular Cytogenetic testing

Indications, Type of sample, Sampling and transport conditions - Fluorescence in-situ hybridization, fluorescence signal enumeration, merits and demerits of FISH.

IV - DNA testing

Organization of human genome, Structure and function of genetic material, Polymerases chainreaction - Types, principles and testing, Sequencing.

V - Practical:

Case studies

Reference books

1. Practical Genetic counseling, Peter S. Harper, 6th edition, Holder Headline Group 2004.
2. Medical Genetics, 3rd edition, Lynn B. Jorde, John C. Carey, Michael J. Bamshad, & Raymond L. White, Mosby, 2006.
3. Genetics in Medicine, Thompson & Thompson, 6th edition, Elsevier 2004.
4. Practical Genetic counseling, Peter S. Harper, 6th edition, Holder Headline Group 2004.

COURSEOUTCOMES						
CO1	The student will be able to become familiar with and practice genetic tests.					
CO2	The student will be able to provide better patient care					
CO3	The student will be able to know detailed information about Genetic Counselling					
CO4	The student will be to know about Genetic testing.					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	d	e	f
1	S		M		s	
2				s		M
3			M			
4	S				S	M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE2025	CLINICAL EXAMINATION OF THE HUMAN VISUAL SYSTEM
	Total Contact Periods – 5
	Total credits - 2
	Course Designed by – Department of Ophthalmology
OBJECTIVES	The core objective of this course is to gain in depth knowledge on the structural and physiological functions of the various parts of the eye and the different examination procedures for the ocular structures.

: I - History Taking

Importance of history taking, Demographic data and its importance, Chief presenting symptoms, History of present illness, History of past illness, Family History, Common ocular symptoms and their causes – defective vision, watering eyes, discharge, redness, pain, asthenopia and other symptoms

II - Visual Acuity measurement

Distance visual acuity-charts, methods and measurements; Near visual acuity –charts, methods and measurements; contrast sensitivity testing; colour vision testing

III - External Examination

Examination of head posture, examination of forehead, examination of eye brows, examination of eyelids, examination of Lacrimal apparatus, examination of eyeball on the whole, examination of the cornea, conjunctiva sclera and anterior chamber, eye movements, muscle balance and squint evaluation

IV - Anterior segment Evaluation

Slit lamp examination of the eyelids, cornea, conjunctiva, anterior chamber depth, iris, and lens Intraocular pressure measurements using non contact tonometer

V - Posterior segment Evaluation

Introduction and importance of posterior segment evaluation- direct and indirect ophthalmoscopy

REFERENCE BOOKS:

1. Comprehensive Ophthalmology – A K Khurana, 5th edition, New Age International Publishers,

2012.

2. Clinical Ophthalmology – Jack J Kanski, 7th edition, Butterworths, 2012

1. Borish's Clinical Refraction - William J. Benjamin, Irvin M. Borish, Butterworth-Heinemann, 2006

COURSEOUTCOMES						
CO1	The student will be able to have the skill to perform basic ophthalmic examination					
CO2	The student will be able to understand concept of theory and clinical evaluation of disease conditions gain an in- depth knowledge on disease outline and clinical evaluation of patients					
CO3	The student will be able to depth knowledge on the functions of the visual system					
CO4	The student will have the skill to perform basic ophthalmic examination					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	D	e	f
1	S		M		s	
2				S		M
3	M		S			
4	M			C		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE2026	PERSONALITY DEVELOPMENT AND STRESS MANAGEMENT
	Total Contact Periods– 4
	Total credits -2
	Course Designed by–Department of HR
OBJECTIVES	<ul style="list-style-type: none"> To Explain the effect of personality, attitudes, perceptions and attributions on Health stress, coping and relaxation.

Unit 1

Introduction to Personality Development, Different Stages of Development, Types of personalities, personality perspectives and theories

Unit 2

How needs impact personality, Maslow's hierarchy of need, Basic Personality Traits; Values, Beliefs, Interactions, Experiences, Environmental influences, the big five dimensions.

Unit 3

Stress; causes, effect and types, Stress resistant personalities, Relaxation; training aspects importance and Body works.

Unit 4

Health stress and coping, Understanding and communicating our health needs, Behavioral and psychological correlates of illness.

Unit 5

Soft skill; need and importance, Personality development and soft skills. Effective communication, listening, speaking, writing, interpretation part of soft skills and personality

Learning Outcome:

By successfully completing this course, students will be able to Describe how a personality develops.

- Define the stages of personality development.
- Define personality types.
- Describe basic personality traits.
- Personality and stress.
- Health stress, coping and relaxation.
- Soft skills and personality.

Text Books:

1. Hurlock (1976). Personality development. Tata McGraw Hill.

2. Baron R A, Psychology 5th edition, Pearsons publication.
3. Abraham A, General Psychology, Tata McGraw hill Education private limited.

Reference Books:

1. Lazarus J Stress Relief and Relaxation Techniques, Viva Book Private limited.
2. Shelly E. Taylor, Health psychology, 7th edition, TATA McGrawHil, New Delhi.

COURSEOUTCOMES						
CO1	The student will be able to Define the stages of personality development.					
CO2	<ul style="list-style-type: none"> • The student will be able to Describe basic personality traits. 					
CO3	The student will be able to Describe how a personality develops-Personality and stress.					
CO4	The student will be able to Develop the Soft skills and personality.					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	D	e	f
1	S		M		s	
2				S		M
3	M		S			
4	S			S		M
Category	Management					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE2027	FIRST AID MANAGEMENT & SPLINTING TECHNIQUES
	TotalContactPeriods–6
	Total credits -2
	Course Designed by–Department of Medicine
OBJECTIVES	Students will gain additional skills in interventional procedures and Differentiate between emergency situation and other use.

Unit-I BACKGROUND INFORMATION

- The importance of first Aid
- First aid supplies
- First aid and the law
- Prevention practices

Unit-II ACTION AT AN EMERGENCY

- Recognizing Emergencies
- Deciding to act
- Seeking medical care
- Disease transmission
- Rescuer reactions

Unit –III BLEEDING AND WOUNDS

- External bleeding
- Wound infection
- Amputations
- Impaled objects
- Wound that require medical care
- Internal Bleeding
- Dressing and Bandages

Unit-IV BONE, JOINT AND MUSCLE INJURIES

- Bone injuries
- Splinting
- Joint injuries
- RICE injuries
- Muscle injuries
- Splints – Introduction, Types, Uses, Splinting guidelines, Slings, Procedure,Complications

UNIT-V RESCUING AND MOVING INJURIES

- Water rescue
- Ice rescue
- Electrical Emergency Rescue Hazardous materials incidents
- Motor Vehicle crashes
- Fires
- Confined spaces

- Triage – what to do with multiple victims
- Moving victims

Text books:

1. First Aid CPR and AED standard (sixth edition)
2. First aid book-St Johns Ambulance services
3. Text book of Orthopaedics – Natarajan
4. Text book of Orthopaedics – John Ebenezer Reference books: First Aid and Management of Minor Injuries by Jon Dallimore First Aid and Beyond by Dan Wolfe - Smashwords , 2014 International Trauma Life Support Provider Manual Essentials Orthopaedics Mark D Mille

COURSEOUTCOMES						
CO1	The student will be able to Differentiate between emergency situation and other use.					
CO2	The student will be able to know about the basics of concepts of disease & outlines of clinical evaluation.					
CO3	The student will be able to List management, assessment, and care steps for upper extremity and lower extremity fractures.					
CO4	The student will be to know Splinting techniques of lower extremities – Thomas splint, sam splint, etc					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	D	e	f
1	S		M		s	
2				S		M
3	M		S			
4	S			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE3028	ESSENTIALS OF MEDICAL TRANSCRIPTION
	Total Contact Periods– 7
	Total credits -2
	Course Designed by–Department of MRD
OBJECTIVES	Provide Hands on training on English Language and listening comprehension and provide foundation to learn medical terminology & learn laboratory report

Unit 1

The Medical Transcriptionist’s career including Ethical& Legal Responsibilities Introduction to Medical transcription, Job Opportunities, Transcription Skills, Medical records, Certification for Medical Transcriptionists, Ethical and Legal responsibilities

Unit 2

Equipments in Transcription Equipment, Computer Systems, Ergonomics, Dictation Equipments, Hand and Foot control Dictation, Transcription Preparation

Unit 3

Transcription Guidelines Punctuations, Proof reading notations, Formats and styles, SOAP for Chart notes; Discharge Summary

Unit 4 PRACTICAL:

1. Equipments for Medical Transcription, 2. Typing for the beginners, 3. Vocabulary, 4. Proof reading Notations , 5. Formats and styles in document preparation , 6. Preparation of chart notes, 7. Listening Comprehension, 8. Transcription check off sheet **References Book** 1. Medical Key boarding, Typing, and Transcribing Techniques and procedures 4th Edition, March

Otis Diehl, Marilyn Takahashi Fordney, W.B. Saunders Company

2. The AAMT Book of Style for Medical Transcription, Claudia J. Tessier

3. CD’s available for:

a. Stedman’s Electronic Medical Dictionary 4.0

b. American Drug Index 2003

Text Books:

1. Medical Key boarding, Typing, and Transcribing Techniques and procedures 4th Edition, March

Otis Diehl, Marilyn Takahashi Fordney, W.B. Saunders Company

2. The AAMT Book of Style for Medical Transcription, Claudia J. Tessie

COURSEOUTCOMES						
CO1	The student will be able to Demonstrate their basic skills in the knowledge of Vocabulary, Medical terminology					
CO2	The student will be able to Demonstrate their basic skills in the preparation of chart notes.					
CO3	The student will be able to Demonstrate skills in listening comprehension					
CO4	<ul style="list-style-type: none"> The student will be be able to identify accurate format for medical document preparation 					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	d	E	f
1	S		M		S	
2				s		M
3	M		S			
4	S			S		M
Category	Medical Records					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE3029	COMMUNICATION AND SOFT SKILL
	Total Contact Periods– 7
	Total credits -2
	Course Designed by–Department of Human Resources
OBJECTIVES	This course is designed to equip the students with essential soft skills needed for workplace and improve personality.

LEARNING OUTCOME:

This course is designed to help the students to

- Foster healthy attitude.
- Develop effective inter and intra personal skills to be an effective team worker.
- Communicate effectively in both academic and professional setup

UNIT: I ASPECTS OF COMMUNICATION

Importance of communication, Process, Barriers, Non verbal Communication

UNIT: II SPEAKING

How to Open and Close conversations, Introductions and Address System, Expressing Courtesy, Giving Compliments and replying to Compliments, Presentation Skills, Telephonic conversation and telephone etiquette

UNIT – III PRESCRIBED READING

Tom Sawyer by Mark Twain, Bacon’s Essays: - Of Goodness and goodness of nature

UNIT – IV WRITING

Letter writing - Letter of Complaints, Inviting and Declining an invitation, Writing Memos and Emails, Grammar, Spelling & Punctuation, Use of Dictionary & Thesaurus.

UNIT – V SOFT SKILLS

Active Listening Skills, Assertive Skills, Negotiation and Persuasive Skills, Interview Skills

Text Book:

Developing Communication Skills by Krishna Mohan and Meera Banerji, II edition, Macmillan.

Reference Books:

1. Communication Skills for Engineers and Scientists by Sangeeta Sharma and Binod Mishra, PHI Learning Private Limited, New Delhi.
2. English and soft skills by S.P. Dhanavel, Orient Black Swan
3. Effective English Communication by Krishna Mohan and Meenakshi Raman, Tata McGraw –Hill Publishing Company Limited.
4. Technical Communication – Principles and Practice, by Meenakshi Raman and Sangeetha Sharma, II edition, Oxford University Press.
5. Developing Communication Skills by Krishna Mohan and MeeraBanerji, II edition, Macmillan.
6. The Complete Guide to Functional Writing in English by M. Sarada, Sterling Publishers (P) Ltd., New Delhi.
7. Speaking Naturally: Communication Skills in American English by Bruce Tillitt and Mary Newton Bruder, Cambridge University

COURSEOUTCOMES						
CO1	The student will be able to Foster healthy attitude					
CO2	The student will be able to develop effective inter and intra personal skills to be an effective team worker					
CO3	The student will be able to Develop effective inter and intra personal skills to be an effective team worker					
CO4	The student will be able to Communicate effectively in both academic and professional setup					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	a	B	C	d	e	F
1	S		M		s	

2				s		M
3	M		S			
4	s			S		M
Category	Basic Medical Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					

UAH19CE3030	PROFESSIONAL SKILLS DEVELOPMENT
	Total Contact Periods– 6
	Total credits -2
	Course Designed by–Department of Human Resources
OBJECTIVES	To Advance the students' intellectual curiosity, competency and skills in preparation for employment

1. Communication Skills

Importance of Communication skills in Public health; Communication process; Methods of communication; Types of communication: Verbal and Non-verbal; Impediments to effective communication; Feedback

2. Oral Presentation Skills:

Preparation and planning; Structure; Audio-visual aids; Creating interest and establishing a relationship with the audience; Body language; Voice and pronunciation; Review

3. Writing skills:

Writing a scientific paper; Writing a proposal; Structure of an article; References and literature review; Peer-review process-Publication bias; International guidelines for publication in journals; Professional Ethics

4. Leadership in Public health:

Leadership styles and trait; Motivation skills; Interpersonal communication skills; Problem solving skills; Decision making skills; Management skills; Communication Skills

5. Manuscript writing

Writing introduction, objectives, methodologies, major finding, discussion, conclusion and recommendation

6. Seminar presentations Use of computers present data and information on recent topics

Text Books:

1. Professional Writing Skills, A self paced training programme by Janis Fisher Chan and Diane Lutovich. Advanced Communication Designs Inc, 2003. San Anselmo, CA. ISBN 0963745549

2. Speaking Your Mind: Oral Presentation and Seminar Skills By Rebecca Stott, Tory Young, Cordelia Bryan Contributor Rebecca Stott, Tory Young, Cordelia Bryan Published by Longman, 2001 ISBN 0582382432, 9780582382435

3. Public Health Leadership: Putting Principles into Practice Louis Rowitz, PhD. Jones and Bartlett Publishers, 2003. ISBN-13: 9780763725013 ISBN-10: 07637250

COURSEOUTCOMES						
CO1	The student will be able to Develop good written and oral communication abilities					
CO2	The student will be able to Develop an understanding of team building and leadership skills.					
CO3	The student will be able to Develop knowledge regarding capacities needed to work independently within diverse work environments					
CO4	The student will be able to know how to maintain Records and Reports and demonstrate the procedure.					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	D	e	f
1	S		M		s	
2				S		M
3	M		S			
4	S			S		M
Category	Basic Medical Science					
Approval	46 th Meeting Of Academic Council held in Aug, 2017					

UAH19CE3031	LIBRARY SCIENCE AND E-RESOURCES
	Total Contact Periods– 6
	Total credits -2
	Course Designed by–Department of Library science
OBJECTIVES	To gain knowledge about Documentary Sources of Information and Library Automation

Unit 1 BASIC CONCEPTS AND INFORMATION SERVICES

Meaning of Library – Types of Library – Library layout - Functions of Library – need for Library – Meaning of ISBN and ISSN – Collection management - Library Classification system - Five laws of Library Science – Inter Library Loan (ILL), Communication theories and models. Barriers to communication. Levels of communications – Intrapersonal, interpersonal and mass communication. Information services – literature search Methods of Dissemination of information Current Awareness Service (CAS), Selective Dissemination of Information (SDI), Document delivery service, Alert services, and Internet services.

Unit 2 INFORMATION SOURCES

Documentary Sources of Information, Print, and Non-print including Electronic, Human and Institutional sources: Nature, types, characteristics and utility. Internet as a source of Information. Primary sources of information – Journal, conference volume, patents, research reports, thesis and their electronic format – Secondary sources of information - Bibliography, Encyclopedia Dictionary, Yearbook , Directory, Geographical Source, Textbook, Index and Abstracts.

Unit 3 LIBRARY AUTOMATION

Definition need, Purpose, advantages. Planning for Library automation. Automation of Library operations - Acquisitions, Cataloguing, OPAC, Circulation and Serials control. Evaluation of Library automation systems - Application of Barcode and RFID Technology for Library Functions. Basic concepts: Bibliography, bibliographic coupling, Impact factor.

Unit 4 ELECTRONIC INFORMATION SOURCES

Electronic Information resources: Meaning and definition, Growth and development, Types. Journals, e-Books, e-Theses, e-newspapers, Blogs, Wikis. Free databases and fee based bibliographical and full text databases, subject related websites, Institutional repositories, Open Archives and digital Libraries. - Resource Sharing and Networks: Consortia- Importance and objectives. Study of Information networks and Digital Library Consortia. Types of computer networks: Local Area Networks – Concept, Topologies - Bus, Star, Mesh, Tree, and Ring). Wide Area Networks and Metropolitan Area Networks- Concepts, Circuit switching and Packet switching. Difference between LAN and WAN. Wireless Networks –Mobile telephones.

Unit 5 DIGITAL LIBRARIES

Digital Libraries: Concepts and issues. Understanding digital Libraries Content creation – Electronic documents, files and file formats. Study of different file formats.Studying PDF in detail- features of PDF.Digitization- scanning, Digital Preservation, Conservation and Archival Management – Problems and prospects. Open Access Movement and Institutional repositories.

TEXTBOOKS

1. Ranganathan, S.R The five Laws of Library Science UBS Publishers, 1988.
2. Ranganathan, S.R. Library Manual SaradaRanganathan endowment for Library Science, 1989.
3. Ranganathan, S.R. Cataloguing Practice SaradaRanganathan endowment for Library Science 1990

COURSEOUTCOMES						
CO1	The student will be able to analyze and understand the query					
CO2	The student will be able to Identify the sources of information					
CO3	The student will be able to Find out the information					
CO4	The student will be able to know how to maintain Records and Reports and demonstrate the procedure.					
MAPPINGBETWEENCOURSEOUTCOMES&PROGRAMMEOUTCOMES						
COs\Pos	A	B	c	d	e	F
1	S		M		s	
2				s		M
3	M		S			
4	S			S		M
Category	Library Science					
Approval	46 th Meeting of Academic Council held in Aug, 2017					