ALLIED & HEALTHCARE INSTITUTE

DDLT

(DIPLOMA IN DIALYSIS TECHNICIAN)

Course Details

1st year Subject	2nd Year Subject
➢ Human anatomy ➢ Human physiology ➢ General microbiology ➢ General pathology ➢ General microbiology ➢ Basic of dialysis technique ➢ Practical	➢ General medicine ➢ General surgery ➢ Clinical nephrology ➢ Dialysis management ➢ Practical

FIRST YEAR

Human anatomy

- Definition and branches of anatomy
- Introduction of anatomical terms
- Structure position and function of digestive organs
- Organization of cell. Tissue organ and system
- Skeletal system Bones: Definition structure function and types
- Detail study of structure of regional bone
- Joint: Definition classification structure movement
- Muscular system:
- Definition structure function and type
- Different muscular position and action
- Cardiovascular system
- heart its position structure conduction system nerve supply and blood supply
- Blood vessels : structure differences position of chief vessels function
- Circulation of blood : systemic pulmonary portal
- Respiratory system: Structure position function of respiratory organs
- Digestive system
- Structure position and function of digestive organs
- Urinary system:- Position structure of organ of urinary system
- Nervous system:

Introduction classification structure of nervous system
Sense organs
Structure of Ear Eye Nose Tongue Skin
Female reproductive system:

External and internal organs

Male reproductive system:

Internal and external organs

Human physiology

- Definition and introduction of physiology
- Organization of cell. Tissue organ and system
- Connective tissue its types function
- Muscular system:
- Definition structure function and types
- Cardiovascular system:-
- Heart its position structure nerve supply and blood supply
- Blood vessels:- structure differences position of chief vessels function
- Lymphatic system
- Circulation of blood:- systemic pulmonary portal
- Cardiac output stroke volume blood pressure pulse rate cardiac rate cardiac cycle
- Blood:- detail description blood group rh factor
- Respiratory system:- respiration physiology lung volume and lung capacity
- Digestive system:- process of mastication deglutition digestion and absorption
- Metabolism of blood constituents
- Urinary system:-
- Physiology of blood filtration micturition
- Regulation of blood temperature
- Fluid and electorate balances
- Introduction classification structure and function of nervous system
- Sense organs:- ear eye nose skin tongue structure and function of ear eye nose skin and tongue
- Female reproductive system:
- Menstrual cycle function
- Male reproductive system:
- External and internal organs
- Endocrine system:- structure and function of pituitary pancreas gland thyroid parathyroid gland thymus and suprarenal gland

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- **General microbiology**
- Definition role scope and branch of microbiology
- Bacteriology: - shape size and structure of bacteria
- Infection : - definition source and mode of transmission of infection
- Imunith: - types in detail immunization schedule
- Sterilization and disinfectant
- **General pathology**
- Definition role scope and branch of pathology
- Inflammation its stage and sign
- Derangement of body fluid
- Shock
- Introduction of hemorrhage thrombosis embolism
- **General pharmacology**
- Definition role scope of pharmacology
- General pharmacokinetics and pharmacodynamics
- Diuretics
- Antjdiuretics
- Antibiotics
- **Basic of dialysis management**
- Function of kidney nephron glmeruls tubules GFR urinary bladder Urethrara
- Basic chemistry of body fluid and electrolytes metric system atron compound molecules atonics weight and molecular weight ion ionic bondining solution concentration of solution electrolyte conductivity moles (unit) morality normality osmolality hydrogen ion conc. ph acids buffer
- body fluids fluids balances

- Types of dialysis

Haemodialysis peritoneal dialysis

Role of dialysis technician

Second year

- General medicines and general surgery
- Infection and communicable diseases
- Metabolic disorder:- diabetes obsity gout
- Diseases of endocrine system
- Diseases of nervous system
- Diseases of G I T
- Disease of blood
- Diseases of cardiovascular system
- Disease of ear nose and throat
- Disease of respiratory system
- Diseases of eye
- General surgery
- Wound
- Ulcer
- Skin graft
- Burn
- Orthopedic conditions
- Gynecological and obstetrics conditions
- Other surgical conditions
- Clinical nephrology and Dialysis management
- Various diagnostic procedures of renal diseases
- Manifestation of renal diseases
- Renal vascular diseases
- Renal involvement in systemic diseases
- Infection conditions of kidney and urinary tract
- Obstruction of urinary tract
- Effects of the drugs on the kidney
- Tumors of kidney and urinary tract
- Hard water syndrome
- Water fluid and electrolyte inbalance

- Dialysis management

- Concept of dialysis
- Haemo dialysis
- Water for dialysis procedure
- Filtration decantation distillation
- Softener deionizer
- Reverse osmosis different in purties
- Water used in dialysis compare ro with d i
- Different types of dialyzer
- description reuse indication care factors improving performance choosing dialyzer priming sterility washing formalin use hemofiltration haemoperfusion

- Dialysis equipment:-

Accessory equipment and functions blood pump monitors of temp. Flow pressure monitors of daily sate concentration ph

- Chemicals used in daily sate advantages and disadvantages
- Delivery system
- Care assessment preparations
- Complications:-
  Complication during and after dialysis. If management potential problems during dialysis prevention hypovolacmia and its management
- Peritoneal dialysis
- Indication. dailysate preparation procedure types care complication- management. toxic substances Added
- Re- Dialysis assessment
- Temporary vascular access
- Goal of dialysis
- Anti-coagulant drug added in PD
- Emergency drugs and injections
- Disinfection procedure of machines and instruments
- Clinical basics of i v fluid creatinin clearance
- Role of dialysis technician.