

UNION TERRITORY OF JAMMU & KASHMIR
OFFICE OF THE ADMINISTRATOR, GOVT. MEDICAL COLLEGE UDHAMPUR



<https://gmcudhampur.in>

Subject: Notification regarding syllabus for non-gazetted posts Advertised vide Notice No. of 11 of 2025-26 dated: 07.01.2026 on academic arrangement basis.

NOTIFICATION

It is hereby notified for the information of all concerned candidates that the official syllabus for the various non-gazetted posts advertised under the aforementioned reference has been finalized.

The syllabus, categorized by post & corresponding Annexure is as follows:

S.No	Name of the post	Annexure
1	Lab technician	A
2	Technical Lab Assistant	A
3	Public Health Nurse	B
4	E.E.G Technician	C
5	Theatre Technician Assistant/Theatre Technician Assistant	D
6	Speech Therapist	E
7	Technical Assistant (Anesthesia)	F
8	Technical Assistant (ENT)	A
9	Refractionist	G
10	Radiographic Technician	H
11	Physiotherapist	I
12	Dental Technician	J
13	Junior Staff Nurse	B
14	CSSD Technical Assistant	D

Candidates are advised to take note of the respective Annexure, corresponding to their applied post.

Please note that the schedule for the conduct of examination for the post will be notified separately via the official website of GMC-AH Udhampur. Candidates are encouraged to check the website regularly for further updates.

By order of Administrator


D.S Katoch (JKAS)
Administrator
Govt. Medical College
Udhampur
Dated:29.04.2026

No. GMC/ESTT./UDH/2026-27/252-56.

Copy to:

1. Commissioner/Secretary, H&ME Deptt. Civil Sectt. UT of JK for the kind information.
2. Principal GMC Udhampur for kind information.

3. Medical Superintendent GMC-Ah Udhampur for information
4. Incharge I/C website for information.
5. Office copy.

SCHEME OF STUDIES

The Training Course of Laboratory Assistant shall comprise of two Parts, i.e. Part -I and Part-II, each of one Year duration.

1st Year

This part shall include basic sciences i.e. Anatomy, Physiology, Bio-Chemistry, Clinical Pathology. The duration of the Study of the Basic Sciences is as under:-

1. Laboratory Management & Ethics.
2. Anatomy
3. Physiology
4. Bio-Chemistry
5. Basic Clinical Pathology
6. Blood Banking.

2nd Year

The Part shall include Pathology parasitology, cytology, Microbiology and Blood Banking. The duration of study for these subjects shall be as below:-

1. Microbiology & Parasitology.
2. Blood Banking
3. Histopathology
4. Advanced Clinical Pathology
5. Cytology

1st YEAR**LABORATORY MANAGEMENT AND ETHICS**

- A. Role of the Laboratory in the Health Care Delivery System:
- i) General
 - ii) Human Health & Diseases.
 - a) Types of Diseases
 - b) Process of Diagnosis
 - c) Laboratory at different levels.
 - d) Duties and responsibilities of Laboratory personnel.
- B. Laboratory Service in the Health care Delivery System in India.
- i) Laboratory Service in India.
 - ii) The Health Administration System in India.
 - a) At the National Level.
 - b) At the State Level.
 - c) At the District Level.
 - d) At the Village Level.
 - e) Voluntary health Organizations in India.
- C. Laboratory Planning:
- i) General Principles.
 - ii) Laboratory Goals.
 - iii) Operational Data.
 - a) Market Potential
 - b) Hospital / Laboratory relatives.
 - c) Competitions.
 - d) Laboratory Trends.
 - e) Planning at different levels.

f) **Guiding Principles for planning Hospital laboratory Services:**

- Factors
- Guiding Principles for Planning.
- Functional Criteria.
- Operational demand.
- Sections of a Hospital Laboratory.
- Common area.
- Design aspect.
- Space requirement.

g) **Planning for a basic health Laboratory.**

D. **Laboratory Organisation (Laboratory Management Techniques):**

- i) **General Principles.**
- ii) **Components and functions of a laboratory.**

2. **ANATOMY THEORY**

A. **Introduction**

- i) **Different Parts of the human body, Common Anatomical Terms, Anatomical Positions and important planes.**
- ii) **Animal Cell.**
- iii) **Tissue of the body, classification and function.**
- iv) **Primary tissues of the body.**

B. **Skeletal System**

- i) **Joints & Movements**
- ii) **Muscle & Monce.**

C. **Gastro-Intestinal System**

- i) Mouth and Pharynx.
- ii) Salivary Glands and Tonsils.
- iii) Oesophagus and Stomach
- iv) Location of different organs in the Abdomen in situ.

D. Genito-Urinary System

- i) Kidney
- ii) Ureters, Bladder and Urthra
- iii) Male Reproductive System.
- iv) Female Reproductive System

E. Respiratory System

- i) Thoracic Cavity, Pleura and Lungs.

F. Cardio-Vascular System

- i) Heart and Pericardium
- ii) Arterial System
- iii) Venous and Lymphatic System

G. Nervous System

- i) Meanings and cerebrospinal fluid.
- ii) Brain, Spinal Cord and the Nerves

H. Loco-Motor System

- i) Parts of Upper Limb :- Bones Land marks and important vessels, parts of lower limb.

3. PHYSIOLOGY THEORY

A. Blood

- i) Composition and General function of Blood.

- ii) Description of Blood Cells:- Normal Counts and function.
- iii) Anti-coagulants

B. Cardio-vascular System

- i) Functions of heart and blood vessels.
- ii) Circulation:- Systemic Circulation.
Pulmonary Circulation

C. Respiratory System:

- i) Name of the Structure involved in respiration and their function.
- ii) External and Internal Respiration. How respiration and expiration are brought about.
- iii) Transport of O_2 and CO_2 in the blood.
- iv) Definition of Respiratory Rate, Tidal Volume, Vital Capacity, Cyanosis, Hypoxia.

D. Excretory System

- i) Functions of Kidney.
- ii) Formation & Composition of Urine-normal and abnormal constituents.

E. Skin

- i) Functions of Skin

F. Digestive System

- i) Composition and functions of Saliva. Mastication and deglutition.
- ii) Functions of Stomach, Composition of Gastric,

Juice, Pancreatic Juice, Bile and Succus entericus.

G. Endocrine Glands

- i) Definition, name and the hormones secreted by them.
- ii) Major action of each hormone.

H. Reproductive System

- i) Male Genital System.
- ii) Female Genital System.
- iii) Names of Primary and Accessory Sex organs in male and female, Secondary Sexual characters in male and female.
- iv) Functions of Ovary, formation of Ova, actions of ovarian hormones.
- v) Functions of Testis-Spermatogenesis and actions of testosterone.

I. BLOOD GROUP, ABO and Rh, basis for classification, basis for determination, importance of Blood Groups.

J. Cerebrospinal Fluid, Formation, composition and functions.

ANATOMY PRACTICAL

- 1. Demonstration of Parts of Body (Bony) landmarks on the surface.
- 2. Identification of Cells and basic tissues.
- 3. Skeletal System, Identification of Bones and Joints.
- 4. Demonstration of Interior of Thorax with organs in Situ.

5.
 - a) Respiratory System and Pleurae.
 - b) Heart and Blood Vessels.
6. Demonstration and identification of various organs within abdomen.
 - a) Liver and Gall Bladder
 - b) Peritoneum Stomach and Intestine.
7. Male Genital System.
8. Female Genital System.
9. Central Nervous Systems, Spinal Cord and site of Lumbar Puncture.

Examination will be:

- a) Identification of bones or parts of Skeletal System.
- b) Identification of basic tissues under the microscope.
- c) Identification of Certain organs and Viva.
- d) Surface marking of any of the important organs.
- e) Identification of sites of blood vessels or muscles for injections and site of lumbar puncture.

PHYSIOLOGY PRACTICALS

1. Microscope-Usage, Maintenance and minor repairs
 - i) Behaviour of RBC in Isotonic, Hypotonic and Hypertonic Sodium Chloride Solution.
2. Identification of Blood Cells focused under Microscope:-
 - i) RBC
 - ii) Various types of WBC
 - iii) Platelets
 - iv) Reticulocytes

3. To obtain samples of Plasma and Serum.
4. Preparations of Anti-Coagulants: double oxalate and Sodium citrate.
5. Haematocrit
6. Identification of ruled area in Neubauer's Chamber, RBC and WBC Pipettes and Wintrobe and Westergren Pipettes.
7. Demonstration of Normal Constituents of Urine and Abnormal Constituents e.g. Glucose and Protein.
8. Record writing.

4. CLINICAL BIO-CHEMISTRY

- A. Elementary knowledge of Inorganic Chemistry-Atomic Weight, Molecular weight, Equivalent weight - Acids, basis and Salts -indicators - molar solutions, Buffer Solution, Titration (Acid Base) Definition of Solutions. Methods of expressing concentration: Dilution.
- B. Elementary knowledge of Organic Chemistry - Organic Compounds. Aliphatic and Aromatic. Alcohols, Aldehydes, Ketones, Amines, Esters, Phenol, Acids Colloids etc.
- C. Elementary knowledge of Analytical chemistry - Instrumentation, centrifuge Balances, Colorimeter, Spectrophotometer, Flamephotometer, Fluorimeter etc.

- D. Aims and Scope of Biochemistry.
- E. CARBOHYDRATES - Importance, Definition, classification, some properties.
- F. PROTEINS -Amino Acids, essential amino acids, peptides, denaturation of proteins, Physiologically important proteins, functions of plasma proteins.
- G. LIPIDS - Definition, classificaion, steroids, examples.
- H. NUCLEIC-ACIDS :- DNA and RNA, their importance.
- I. HAEMOGLOBIN.
- J. ENZYMES AND CO-ENZYMES-Elementary.
- K. GASTRIC JUICE collection, Acidity.
- L. CARBOHYDRATE-METABOLISM- elementary aspects, definition of Glycolysis, Glycogenolysis Hormonal regulation of Blood Sugar, Diabetes-Mellitus - Ketosis, Glycosuria, Renal Glycosuria, Penotosuria.
- M. METABOLISM OF LIPIDS-elementary aspects, Triglycerides, Cholestrol. Plasma Lipoproteins - Ketone bodies and Ketonuria.
- N. PROTEIN METABOLISM- Formation of Urea, Creatinine, Proteinuria. Edema, Transaminases.
- O. WATER AND MINERAL METABOLISM-Dehydration Calcium, Phosphorus, Sodium, Potassium, Chloride, Iron, Iodine, their physiological functions and disease

state.

- P. HARMONES-definition, functions of some important hormones.
- Q. Blood and cerebrospinal Fluid functions of Blood & CSF.
- R. Urine Normal and abnormal tests. Al, Sugar, K, bile,

BIOCHEMISTRY PRACTICAL:-

Practical Part must Learn Following

1. Basic Techniques:-

- i) Cleaning of Glassware.
- ii) Preparation of Chromic acid was solution.
- iii) Preparation of salturated solution.
- iv) Types and use of pipettes.
- v) Balance-types and uses.
- vi) Preparation of percent solution/volume/volume components (V/V/)
- vii) Preparation of percent solution weight by volume (W/V) solution.
- viii) Preparation of Molar Solution.
- ix) Preparation of Buffer Solution.
- x) Indicators pH, determination of unknown solutions.
- xi) Preparation of Normal Solutions.
- xii) Titration -(Acid Base) Preparation of Primary Standards.
- xiii) Titration preparation of Normal Solutions.
- xiv) Preparation of Protein filtrates.
- xv) Use and maintenance of centrifuge.
- xvi) Colorimeter-types, components, use and maintenance.
- xvii) Colorimetry.

- xviii) Colorimetry-Choice of filters.
- xix) Spectrophotometer-components, use and wavelength selection.
- xx) Flamephotometer components and use demonstration.
- xxi) List of spare parts of equipments maintenance.
- xxii) Distillation of water-setting up Glass Distillation Unit and Metal water Distillation Unit.

CLINICAL BIOCHEMISTRY PRACTICAL:-

1. Diagnostic tests on urine:-
 - i) Collection and preservation.
 - ii) Physical characteristics and specific gravity.
2. u
 - i) Qualitative tests for urea, Uric Acid, Creatinine, Calcium. Phosphorous, sodium, Potassium and chloride.
 - ii) PH.
 - iii) Urea clearance and Creatinine clearance.
3. Abnormal Constituents of Urine.
 - i) Qualitative test for -Sugar, Albimin, Ketone Bodies, Blood, Bile Salt and Bile Pigment.
4. Da-----tests on Blood.
 - i) Collection and preservation of Blood, Serum and Plasma b/w
 - ii) Estimation of Blood Sugar.
 - iii) Glucose Tolerance test.
5. Non-Protein nitrogenous compound:
 - i) Determination of Serum Urea, Uric Acid and creatinine.

6. Determination of Serum Protein:
 - i) Albumin, Globulin, Fibrinogen & AG ratio.
7. Serum-Electrolytes.
 - i) Determination of Na^+ , K^+ and Cl .
 - ii) Determination of inorganic Phosphorus.
 - iii) Determination of Calcium.
8. Serum Enzymes:
 - i) Determination of transaminases (GOT and GPT)
 - ii) Determination of Phosphatase (Alkaline phosphate and Acid Phosphate)
 - iii) Determination of amylase.
9. Serum Bilirubin:
 - i) Determination of total and direct bilirubin.
10. Serum Lipids:
 - i) Lipid Profile.
 - ii) Determination of Serum Cholesterol.
11. Liver Function Tests.
12. Diagnostic test on other body fluids.
 - i) Gastric juice:-
 - a) Tests of HCl. Blood and Starch.
 - b) Free and total acidity.
 - c) Gastric function tests.
 - ii) Cerebrospinal Fluid
 - a) Determination of Sugar
 - b) Determination of Proteins.
 - c) Determination of Proteins.
 - d) Pandy's Test.
13. Kidney or Renal function test.:
 - i) Importance of renal function tests.

ii) Tests:

- a) Concentration / Specific Gravity tests.
- b) Dilution test.
- c) Urea Clearance Test.
- d) Creatinine Clearance test.

14. Laboratory Maintenance and improvement

- i) Quality control
- ii) Automation and kits.
- iii) Laboratory Management.

5. Basic Clinical Pathology:-

- Pathology
- Haematology
- Collection of Blood
- Composition of Blood
- Types of Anti-Coagulant Tubes and their Uses
- RBC's and various process of counting RBC's manually/
clinically / automatically.
- Erythropoiesis
- Haemocytometer and its uses
- Types of WBC's and process of Counting, manually/
automatically.
- Colour indexes, its types and methods of calculation
- PBF(Peripheral Blood Film) its preparation, Staining.

- Various Types of Romansky Stains and Uses
- Leishman's Stains
- Buffer Solution
- PBF staining by Romansky Staining
- Platelet Count. Process of counting Manually and Automatically.
- Absolute Eosinophil Count & its estimation.
- ESR and various methods of estimation of ESR in detail.
- PCV and its procedure for conducting.
- Urine, Composition of Urine in detail, Urine Examination under Microscope.
- Various methods of sampling Urine for conducting various examinations like
 - ❖ Albumin, Sugar, Acetone, Bile pigmentation, Bile Salt, Urobilinogen, Occult Blood , KFT etc.
- Microscope, Parts and Functions in Laboratory.
- Haemoglobin in detail, Its estimation manually and clinically.
- Preparation of N/10 HCL role. In estimation of Haemoglobin
- Centrifuge , and its uses.
- Haemometer Set.

6. Blood Banking:-

- Blood Banking
- Types of Blood Banking
- Process of Coagulation
- Rh- Factor.
- Erythroblastosis Foetalis
- MN- Group System

PRACTICAL PART MUST INCLUDE FOLLOWING

- Haemoglobin estimation.
- Preparation of N/10 HCL / Buffer Water
- ROMANOSKY Stains
- Preparation , Staining , Examining , Counting of WBS's in PBF
- Preparation of Acetic Acid Solution and Ammonia Solution
- Preparation of Benedict's reagents.
- Estimation of ESR / PCV its advantages / Disadvantages
- Urine Examination(Physically / Chemically/Microscopically)
- Estimation of TLC , RBC's, Platelet Count etc.

2nd Year D-MLT

1. a. MICROBIOLOGY AND PARASITOLOGY

MICROBIOLOGY AND PARASITOLOGY THEORY

A. Requirement and use of Common Laboratory Equipments

Incubator, Hot Air Oven. Autoclave, Water-Bath. Anaerobic jar, Vacuum Pump, Media Pouring chamber, Refrigerator, Centrifuge.

B. Microscope

Principle, Operation, Care and use of Microscope

C. Sterilization and Dis-infection

Classification and general principles of Sterilization. Physical, Chemical and Mechanical Methods. Disposal of contaminated Media, Syringes, Glassware, Apparatus.

D. Classification and Morphology of Bacteria:

Brief outline of:-

- i) Structure of Cell, Capsule, Flagella and spores.
- ii) Growth of Bacteria
- iii) Nutrition of Bacteria.

E. Staining of Bacteria:

- i) Simple, Grams, Ziehl-Neelsen, Albert, Spore stain,
- ii) Composition and preparation of Staining reagents.

F. Cultivation of Micro-Organisms-I: (In detail)

Classification of Media, Composition of Laboratory culture Media, and Special Media.

G. Cultivation of Micro-Organisms-II: (In detail)

H. Identification of Bacteria:

Cultural Characters, Bio-Chemical reactions and serotyping.

I. Normal flora of micro-organisms in the human body.

J. Gram Positive and Gram Negative, Staphylo-coccus, Pneumo-coccus, Neisseriae (in brief)

K. Gram Negative Bacilli:

Salmonella, Shigella, E. Coli, Klebsiella, proteus, Pseudomonas, Vibrio cholerae, Haemophilus. (In Brief)

L. Gram Positive Bacilli:

i) Aerobic

a) Corynebacterium diphtheriae. (In Brief)

b) Mycobacterium tuberculosis and Mycobacterium leprae.

ii) Anaerobic bacilli-Clostridia. (In Brief)

M. Antibiotic Sensitivity test - Principles and methods of determination of sensitivity.

Candida. Aspergillus. Dermatophytes. (In Brief)

N. HIV & AIDS:

Brief Account

O. Immunity, Antigens, Antibodies and antigen antibody reaction and their applications in diagnosis of diseases.

P. Principles, Procedures and Diagnostic significance of agglutination Precipitation, Neutralisation and complement fixation reactions.

Q. Collection and processing of Clinical materials like Sputum, Urine, Swabs, Stool, Blood, CSF and Aspirates.

1. b. PARASITOLOGY:**A. Brief Account of:-****Morphology, Life Cycle, Pathogenicity and Laboratory diagnosis of:-**

- E. histolytica, E. Coli, Giardia, Trichomonas, Plasmodia, Leishmania, Hook worm, round worm, whip worm, Tape worm, Echinococcus granulosus, granulosus, dracunculus, Wucheraria bancrofti.

MICROBIOLOGY PRACTICALS:

1. Personal safety and precautions.
2. Emergency treatment for Laboratory accidents.
3. Care and cleaning of Glasswares, syringes, apparatus, preparation of Pasteur pipettes and sealing of ampules.
4. Operation of Autoclave, incubator, Water bath, PH meter, Scitz filter, Ph comparator, Vacuum pump.
5. Operation of Anaerobic system.
6. Urine c/s & Colony count.
7. Pus C/S.
8. Sputum C/S and Blood C/S.
9. Sterilization, Packing, Loading of materials in Autoclave, Hot Air Oven, Inspissator.
10. Handling care of Microscope.
11. Preparation of various Media-Pouring and Storage.
12. Hanging Drop Method.
13. Collection of Clinical Materials - Blood Urine, Stool, Pus Swab, Throat Swab.
14. Receipt and Recording of Specimen in the Laboratory and dispatch of specimen to reference laboratory for tests.

15. Gram Stain, Z.N. Stain, Albert's Stain, Capsule Staining.
16. Inoculation of Clinical Material in Media.
17. Isolation of Organisms in pure culture.
18. Antibiotic Sensitivity test.
19. Disposal of contaminated materials.
20. Fungus Examination by wet mount of culture.
21. Animal house training collection of blood of sheep and horse.

PARASITOLOGY PRACTICALS:

1. Collection, Preservation and Transportation of fecal material for examination of Parasites.
2. Preparation of stained and unstained, fecal material for parasites.
3. Concentration Techniques of Stool.
4. Preservation of Parasites.
5. Identification of Ova and Cyst in Stool. occult Blood.
6. Parasites Blood films.
7. Serology:-
 - Widal
 - VDRL
 - Ra Test
 - CRP Test
 - ASO Test
 - Elisa for HIV-1 & 2
 - HBsAg (Australia Antigen)
 - Pregnancy Test.
8. **DIAGNOSTIC SKIN TEST:**
Mantoux Test, Casoni's Test.

**LECTURE WILL BE WITH THE AID OF
CHARTS & OTEHR TEACHING AID MATERIALS**

2. Blood Banking:-

- * Definition of Blood Banking
- * Blood Grouping and procedures for testing.
- * Cross matching in Blood Bank.
- * AIDS , Various procedures for Testing.
- * Blood Donor / Receptor , Procedure of Blood Collection from a donor.
- * Precautions to be taken before Blood Collection.
- * Storage of Blood
- * Anticoagulants, Used is Blood banks.

A. Introduction of Haematology.

B. Collection of Blood

C. Anticoagulants

D. Red Cell Count:

i) Haemocytometer

ii) Methods

iii) Calculation

E. White Cell Count. (Total Leucocyte Count):

i) Morphology of White Cells.

ii) Normal Values.

iii) Romanowsky Stains.

iv) Staining Procedures.

- v) Counting Methods.
- F. Absolute Eosinophil Count:
- G. Erythrocyte Sedimentation Rate (ESR):
 - i) Westergren's Method.
 - ii) Wintrobe's Method.
 - iii) Factors effecting ESR.
 - iv) Importance and Limitations.
 - v) Normal Values.
- H. Packed Cell Volume.
 - i) Macro and Micro Methods.
 - ii) Normal Values.
- I. Haemoglobin Estimation and its clinical importance.
- J. Red Cell indices
 - i) Calculations and importance.
- K. Reticulocyte Count:
 - i) Methods
 - ii) Appearance
 - iii) Normal Values.
- L. Sickle Cell Preparation.
- M. Osmotic Fragility Test:
 - i) Scoring Test.
 - ii) Qualitative and Quantitative Test
 - iii) Normal Values.
 - iv) Factors allocating fragility.
 - v) Interpretation.
- N. Peripheral Blood Film

O. Preparation of Bone Marrow Smears.

P. Coagulation Tests:

- i) Process of Coagulation.
- ii) Factors of Coagulation.
- iii) Tests of Coagulation:
 - a) Bleeding time.
 - b) Whole Blood Coagulation Time.
 - c) Clot Retraction Test.
 - d) Prothrombin Test.
 - e) Tourniquette.
 - f) Platelet Count.

Q. Urine-Analysis:

- i) Normal Constituent.
- ii) Physical Examination.
- iii) Chemical Examination.
- iv) Microscopic Examination.

R. CSF Examination.

- i) Normal and abnormal Cell count.

S. Semen Analysis:

- i) Physical Examination
- ii) Motility.
- iii) Morphology.

T. Coomb's Test

3. HISTO-PATHOLOGY

- * Sections of Pathology
- * Chemical used in Tissue Processing
- * Decalcification , Methods of Decalcification, &

Decalcification of Bones, Solutions used for Bone Decalcification

- * Grossing / Embedding , Procedure of Embedding tissue in Paraffin Wax.
- * Microtomy , Procedure of Paraffin Wax Tissue Block.
- * Various Instruments used in Microtomy
- * Microtome Machine
- * Tissue Processing in Histopathology manually / Clinically / Automatically.
- * Automatic Tissue Processor and its uses in detail
- * Tissue Staining. Steps of Tissue Staining.
- * Haemotoxylin Stain / Eosin Stain/ 1% Acid Alcohol / 1 % Ammonia Solution / ESS Albumin.
- * H & E Staining
- * Frozen Section its Preparation and staining.
- * Fixative and Fixation and their uses.
- * Tissue Grossing
- * Special Procedures of staining a tissue in Histopathology.
- * Tissue staining in IHC.
- * Honing / Strapping of Microtome Knife.
- * Mounting Materials
- * Procedure of Mounting Museum Specimen
- * Laboratory Safety, Precautions, Washing Techniques, etc for laboratory Equipment's.
- * Incubator and its uses.
- * Disposal of Pathology specimens.

11. Autopsy Technique:

- i) Assisting in Autopsy.
- ii) Preservation of organs & Processing of

Tissues.

12. Waste disposal and safety in Laboratory.

**LECTURER WILL BE WITH THE AID OF
CHARTS & OTHER TEACHING AND MATERIALS****4. ADVANCED CLINICAL PATHOLOGY**

- Anemia, Various types of Anemia.
- Bone Marrow , Preparation and Staining of Bone Marrow.
- Procedures for BT/CT/PTT/INR Test.
- Reticulocyte and Counting of reticulocyte
- Preparation of sickle Cell.
- Osmotic fragility test.
- Procedure & Precautions for collecting Bone Marrow
- Coombs Test
- CSF Test , Preparation, Collection , Staining procedures.
- Bacteriologically Testing of Urine.
- Bence Jones Testing
- Semen Testing , Counting , Staining (Physically/ Clinically/ Automatically)
- Foetal Haemoglobin
- Haemophilia and its detection
- Stool Collection and Testing(Physically /Chemically/ Microscopically/Bacteriologically)
- Analysers , Handling and maintenance
- Jaundice and investigations
- Diabetes Mellitus , Types , Investigations

5. Cytology

- * Description of cytology in detail
- * Fixatives used in cytology
- * Dry Fixation and Wet Fixation
- * Stains used in Cytology , Preparation of stains in cytology , Various Types of Stains in Cytology.
- * BLF Cytology
- * Sex Chromatin staining in Cytology.

Practical Part must include following:

1. Use of Microscope & Care.
2. Haemoglobin estimation.
3. ESR
4. RBC Count.
5. WBC Count
6. Platelet Count
7. Absolute Eosinophil Count.
8. Reticulocyte Count.
9. PCV.
10. Leishman Staining and PBF -Normal and abnormal cells.
11. Bleeding time.
12. Clotting time.
13. Bone Marrow Aspiration-Staining, Staining for Iron Stores.
14. Prothrombin Time-PTI
15. Tests for G6PD deficiency.
16. foetal Haemoglobin Estimation.
17. Serum / Urine Electrophoresis.
18. Coomb's Test.

URINE EXAMINATION:

1. Physical Examination - Colour, Reaction, Odour, Specific gravity Urinary Volume.

CHEMICAL EXAMINATION:

1. Tests for protein, 24 hours urinary proteins.
2. Bence Jones Proteins.
3. Tests of Sugar, Ketone bodies.
4. Urine for bile salts, bile pigments and Urobilinogen.
5. Microscopic examination of urine.
6. Semen Analysis.

PRACTICALS MUST INCLUDE FOLLOWING:

1. Fixation Processing, Embedding, Section cutting and preparation of Slides.
2. Staining of Sides H & E Reticulin, PAS, Masson Trichrome.
3. Sharpening of knives for microtomes.
4. Preparation of adhesive to fix the section to the slide.

PRACTICALS MUST INCLUDE FOLLOWING:

1. Collection of sample for Cytological examination of various body fluids.
2. Preparation and fixation of cytology smears. Giemsa and papanicolaou staining technique.
3. Sex Chromatin technique.
4. FNAC.

2. BLOOD BANKING:

- A. Introduction and Historical aspects.
- B. Human Blood Group Antigens, their inheritance and antibodies.
- C. ABO Blood Group System.
 - i) Sub-Groups

- ii) Source of Antigens, types of antibodies.
- D. Rh. Blood Group System:
 - i) Nomenclature and types of Antigens.
 - ii) Mode of inheritance.
 - iii) Types of Antibodies.
- E. Other Blood Group System.
- F. Techniques of Grouping and Cross Matching.
- G. Blood Collection:
 - i) Selection and Screening of Donor.
 - ii) Collection of Blood.
 - iii) Various anticoagulants used.
 - iv) Storage of Blood.
- H. Blood Transfusion:
 - i) Procedures and Complications.
 - ii) Blood Transfusion Reaction, Types, Investigation and Presentation of Transfusion Reaction.
- I. Coomb's Test.
- J. Organization, operation & Administration and Blood transfusion techniques.

RACTICALS MUST INCLUDE FOLLOWING:

- 1. ABO Grouping
 - i) Slide Technique.
 - ii) Tube Technique.

2. Cross Matching:
 - i) Methods of Major Cross Matching.
3. Rh. Typing:
 - i) Rapid Tube Test.
 - ii) Saline Anti-D
 - iii) One Stage Albumin Technique.
 - iv) Two Stage Albumin Technique.
 - v) Coomb's antihuman globulin technique.
4. Coomb's Test:
 - i) Direct Coomb's
 - ii) Indirect Coomb's.
5. Donor Screening and Selection:
 - i) Identification.
 - ii) Recording
 - iii) Haemoglobin estimation.
 - iv) Relevant Medical History of the Donor.
 - v) Grouping and Typing of Donor's blood.
6. Drawing of Blood.
 - i) Asepsis.
 - ii) Reassurance.
 - iii) Vein Puncture and Collection.
 - iv) Care of Donor.
7. Blood Storage:
 - i) Anticoagulants preparation.
 - ii) Recording the details and storage of Blood.
 - iii) Maintenance and cleaning of various equipments used in Blood Bank.

Annexure - B.

CURRICULUM

BIO-SCIENCE

Placement- FIRST YEAR

Time: Theory- 120 hours

Anatomy and Physiology-90 hours

Microbiology- 30 hours

ANATOMY AND PHYSIOLOGY

Course Description

This course is designed to help students gain knowledge of the structure and function of the human body and recognize any deviation from normal health in order to render effective nursing services.

General Objective

Upon completion of the course, the student shall be able to:

1. Describe in general the structure and functions of the human body.
2. Describe in detail the structure and functions of the different organs and systems in the human body.
3. Apply the anatomical and physiological principles in the practice of nursing.

Total Hours – 90

Unit No.	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
I	Define and spell various anatomical terms.	Introduction to anatomical terms organization of the human body a) Anatomical terms b) Systems and cavities of the human body	4	Lecture cum Discussions. Explain using charts Record book	Short answer questions Objective type
II.	Describe different organs of the body, systemic function and their inter-relationship.	Introduction to the detailed structure of the body a) The cell: Structure, reproduction and function b) Tissues including membranes and glands : types, structure and functions c) Body cavities and their contents	6	Lecture cum Discussions. Explain using microscopic slides, Skeleton and torso	Short answer questions Objective type
III	Describe the composition of blood and its functions.	Blood a) Composition and formation of blood b) Functions of blood c) Blood clotting, blood grouping and cross matching d) Blood products and their use.	6	Lecture cum Discussions. Explain using microscopic slides	Short answer questions Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
				Demonstration of blood grouping and cross-matching, Hb estimation	
IV.	Describe the structure and functions of heart and blood vessels	The Circulatory System a) Heart : Structure, functions including conduction system and cardiac cycle b) Blood vessels : Types, Structure and position c) Circulation of blood d) Blood pressure and pulse	6	Lecture cum discussions. Explain using charts, models and specimen	Short answer questions Objective type Essay type
V.	Describe structure and functions of lymphatic system	The Lymphatic system - Structure and function of lymph vessels, Lymph nodes and lymph circulation, lymphatic tissue - spleen and thymus	6	Lecture cum discussions. Explain using charts and models	Short answer Objective type Essay type
VI.	Describe the structure and functions of respiratory system	The Respiratory system a) The structure and functions of respiratory organs b) The physiology of respiration c) Characteristics of normal respiration and deviation.	6	Lecture cum discussions. Explain using charts and models, specimens Demonstration of spirometry	Short answer Objective type Essay type
VII.	Describe the structure and function of digestive system	The Digestive system a) Structure and functions of the alimentary tract and its accessory organs. b) The process of digestion, absorption and metabolism of food constituents.	6	Lecture cum discussions. Explain using charts, models and videos	Short answer Objective type Essay type
VIII.	Describe the structure and functions of organs of Excretory system.	The Excretory system a) Structure and functions of the kidney, ureters, urinary bladder, and urethra b) Formation and composition of urine. c) Fluid and electrolyte balance d) Structure and functions of the skin. e) Regulation of the body temperature.	6	Lecture cum discussions. Explain using charts, slides models and videos	Short answer Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
IX.	Describe the structure and functions of endocrine glands.	The Endocrine system - The structure and functions of the pituitary, thyroid, parathyroid and adrenal glands, pancreas (islets of Langerhans), ovaries and testes	6	Lecture cum discussions. Explain using charts and models	Short answer Objective type Essay type
X.	Describe the structure and functions of male and female reproductive system and accessory organs	The Reproductive system a) Structure and functions of the female reproductive system b) Process of menstrual cycle, reproduction and menopause c) Structure and functions of breasts d) Structure and functions of the male reproductive system e) Reproductive health	8	Lecture cum discussions. Explain using charts, videos, models and specimens	Short answer Objective type Essay type
XI.	Describe the structure and functions of Nervous system.	The nervous system a) Types of nerves- structure and functions b) Brain and cranial nerves. c) Spinal cord and motor and sensory pathways of the spinal cord, autonomic nervous system.	10	Lecture cum discussions. Explain using charts and models	Short answer Objective type Essay type
XII.	Describe the structure and function of sensory organs	The sense organs a) Skin, eye, ear, nose and tongue b) Physiology of vision, hearing, smell, touch, taste and equilibrium.	6	Lecture cum discussions. Explain using charts, videos and models	Short answer Objective type Essay type
XIII.	Describe the structure and functions of skeletal system.	The Skeleton a) Formation and growth of bones b) Tendons, ligaments and cartilages c) Classification of bones, joints d) Joint movement e) Axial and appendicular skeleton	8	Lecture cum discussions. Explain using charts, models and skeleton	Short answer Objective type Essay type
XIV	Describe structure and functions of Muscular system.	The Muscular System a) Type, structure and functions of muscle b) Origin, Insertion, and action of muscles	6	Lecture cum discussions. Explain using charts, slides and models	Short answer Objective type Essay type

MICROBIOLOGY

Course Description

This course is designed to help students gain knowledge and understanding of the characteristics and activities of micro-organisms, how they react under different conditions and how they cause different disorders and diseases. Knowledge of these principles will enable student to understand and adopt practices associated with preventive and promotive health care.

General Objectives

Upon completion of the course, the students shall be able to:

1. Describe the classifications and characteristics of micro-organisms
2. List the common disease producing micro-organisms
3. Explain the activities of micro-organism in relation to the environment and the human body.
4. Enumerate the basic principles of control and destruction of micro-organisms.
5. Apply the principles of microbiology in nursing practice.

Total Hours – 30

Unit. No.	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
I	Describe evolution of microbiology and its relevance in nursing.	Introduction a) History of bacteriology and microbiology. b) Scope of microbiology in Nursing	3	Lecture cum discussions.	Objective type Short answers
II	Classify the different types of micro organism. Describe the normal flora and the common diseases caused by pathogens Explain the methods to study microbes	Micro Organisms a) Classification, characteristics, (Structure, size, method and rate of reproduction) b) Normal flora of the body. c) Pathogenesis & common diseases. d) Methods for study of microbes, culture & isolation of microbes.	8	Lecture cum discussions. Explain using slides, films, videos, exhibits, models Staining and fixation of slides.	Short answer Objective type Essay type
III	Describe the sources of infection and growth of microbes. Explain the transmission of infection and the principles in collecting specimens	Infection and its transmission a) Sources and types of infection, nosocomial infection. b) Factors affecting growth of microbes. c) Cycle of transmission of infection portals of entry, exit, modes of transfer. d) Reaction of body to infection, mechanism of resistance. e) Collection of specimens.	4	Lecture Demonstrations Specimens Explain using charts	Short answer Objective type Essay type

IV	Describe various types of immunity, hypersensitivity, autoimmunity and immunizing agents	Immunity a) Types of immunity – innate and acquired. b) Immunization schedule. Immunoprophylaxis (vaccines, sera etc.) c) Hypersensitivity and autoimmunity. d) Principles and uses of serological tests	5	Lecture cum discussions. Demonstration Exhibits	Short answer Objective type Essay type
V	Describe the various methods of control and destruction of microbes	Control and destruction of Microbes a) Principles and methods of microbial control - Sterilization - Disinfection - Chemotherapy and antibiotics - Pasteurization b) Medical and surgical asepsis c) Bio-safety and waste management	5	Lecture, Demonstration Videos Visit to the CSSD	Short answer Objective type Essay type
VI.	Demonstrate skill in handling & care of microscopes Identify common microbes under the microscope	Practical Microbiology a) Microscope – Parts, uses, handling and care of microscope b) Observation of staining procedure, preparation and examination of slides and smears c) Identification of common microbes under the microscope for morphology of different microbes.	5	Lecture, Demonstrations Specimens Slides	

BEHAVIOURAL SCIENCES

Placement- FISRT YEAR

Time- 60 Hours

Psychology- 40 hours

Sociology- 20 hours

PSYCHOLOGY

Course Description

This course is designed to help students understand the dynamics of human behavior and concept of mental health. This shall enable them to develop positive attitude and good inter – personal relationships in the practice of nursing in all health care settings.

General Objectives

Upon completion of the course, the students shall be able to:

1. Describe the concept of mental health and psychology.
2. Explain the dynamics of human behavior, personality and learning.
3. Discuss the role of adjustment mechanisms and emotions in health and illness.
4. Demonstrate skills in the application of principle of psychology in nursing practice in all kind of health care settings.

Total Hours – 40

Unit. No.	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
I	State the concept, scope and importance of psychology.	Introduction a) Definition, nature and scope of psychology b) Importance of psychology for Nurses	2	Lecture cum discussion.	Short answer Objective type
II.	Describe the structure of the mind.	Structure of the mind a) Conscious, pre-conscious b) Id, ego and super ego	2	Lecture cum discussions.	Short answer Objective type
III.	Illustrate the dynamics of human behavior. Describe the concept of mental health	Psychology of Human Behavior a) Basic human needs, dynamics of behavior, motivation drives b) Body mind relationship, mental health, characteristics of mentally healthy person, emotional control, psychological problems of patients and relatives.	12	Lecture cum discussions. Role play	Short answer Objective type Essay type

Unit. No.	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
		c) Stress and conflicts, natural sources and types of stress and conflicts, dealing with stress and conflict, frustration – sources and overcoming frustration d) Mental mechanism their uses and importance e) Attitudes - meaning, development changes in attitude, effects of attitudes on behavior, importance of positive attitude for the nurse. f) Habits-meaning and formation. g) Breaking of bad habits, importance of good habit formation for the nurse.			
IV	Describe and apply the process of learning, thinking, reasoning, observation and perception	Learning a) Nature, types and laws of learning. b) Factors affecting learning, memory and forgetting. Thinking and Reasoning - Nature and types of thinking, reasoning, problem solving, importance of creative thinking for nurse. Observation and Perception - Attention, perception, laws of perception, factors affecting attention and perception, and errors in perception	13	Lecture cum discussions. Roleplay	Short answer Objective type Essay type
V	Discuss the concept and development of personality.	Personality a) Meaning, nature and development, types of personality b) Assessment of personality importance of knowledge of personality for the nurse. c) Characteristics of various age groups – child adolescent, adult and aged d) Will and character.	6	Lecture cum discussions. Role play Psychometric assessment	Short answer Objective type Essay type
VI	Discuss the nature and measurement of intelligence.	Intelligence a) Definition, Meaning, individual differences in intelligence b) Mental ability, nature of intelligence and development c) Assessment of intelligence	5	Lecture cum discussions. Demonstration Role play IQ testing	Short answer Objective type Essay type

SOCIOLOGY

Course Description

This course is designed to help student gain an understanding of sociology in the context of its relevance to nursing practice.

General Objectives

Upon completion of the course, the students shall be able to:

1. Describe the concept of the family as a social unit and the status of the individual in the family.
2. Explain the dynamics of society and identify common social problems.
3. Demonstrate ability to understand the socio – cultural and economic aspects of the community in the light of their effects on health and illness.
4. Utilize the knowledge and understanding of sociology in nursing practice.

Total Hours - 20

Unit No.	Learning Objectives	Content	Hr.	Teaching learning activities	Method of assessment
I	Describe the nature, scope & content of sociology and its importance in nursing	Introduction a) Definition and scope of sociology b) Its relationship with other social sciences c) Uses of sociology for nurses.	2	Lecture cum discussions	Short answer Objective type
II	Describe the influence of the environment on individual development and the rights and responsibilities of the individual in the society	Individual a) Review of human growth and development b) The socialization process c) Effect of environment on human growth and development d) Rights and responsibilities of the individual in a democratic society.	2	Lecture cum discussions	Short answer Objective type Essay type
III	Describe the concept of family as a social unit	The Family a) Definition, characteristics and types of family. b) Family cycle and basic needs of family c) Importance of interdependence of family members. d) Important functions of family and their problems. e) Types of Marriage, medical and sociology aspects of marriage.	4	Lecture cum discussions	Short answer Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Teaching learning activities	Method of assessment
IV	Describe about social groups, social change, control, stratification and social problems	Society a) Definition and meaning. b) Social groups - Types, Structure, intergroup relationship group cycle, group behavior and group morale. c) Social change -Meaning, factors affecting and effect on society and institution leading to social problems. d) Social control e) Social stratification f) Social problems-Prostitution, crime divorce, dowry system, juvenile delinquency, drug addiction alcoholism, handicapped, over population and slum g) Social agencies and remedial measures	8	Lecture cum discussions Visits to social institutions	Short answer Objective type Essay type
V	Describe the culture and characteristics of community	The Community a) Community – Definition and types – Rural and urban b) Culture and characteristics	4	Lecture cum discussions	Short answer Objective type Essay type

NURSING FOUNDATIONS

Placement- FIRST YEAR

Time- 210 hours

Fundamentals of Nursing- 190 hours

First- Aid- 20 hours

FUNDAMENTALS OF NURSINGS

Course Description

This course is designed to help students develop an ability to meet the basic health need of the patients with regard to nursing care and develop skill in the competencies required for rendering effective patient care.

General Objectives

Upon completion of the course, the students shall be able to:

- 1 Describe the physical, mental and social adjustment required of a sick individual and his family.
- 2 Carry out basic nursing techniques and care with the application of sound scientific principle.
- 3 Explain the concept of comprehensive nursing care.
- 4 Develop skills in assessment, planning, implementation and evaluation of the nursing care rendered to the patients.
- 5 Communicate effectively and establish good interpersonal relationship with the patients, their relatives and other health team members.
- 6 Demonstrate skills in observation, recording and reporting.
- 7 Recognize and utilize opportunities for planning and implementing need based health teaching programme (s) for individuals, groups, families and communities.

Total Hours - 190

Unit. No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
1	Define nursing and explain its nature, meaning, scope, ethics and principles in nursing. Identify the qualities of	Introduction to Nursing a) Nursing – concept, meaning, definitions, scope and functions. b) History of nursing in India c) Nursing as a profession d) Nursing professional – qualities and preparation.	25	Lecture cum discussions	Short answer Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
	a professional nurse health care agencies and its functions. Describe the holistic approach to nursing and the determinants of health and the effects of illness.	e) Ethics in Nursing-roles and responsibilities of a nurse. f) Health care agencies – hospital and community service – types and function of hospitals health team. g) Modern approaches to nursing care including holistic nursing care h) Health and Disease - Definition of health, determinants of health status. - Basic human needs - Illness and its effects on individual			
II	Describe nursing care of the patient/client in hospital using nursing process. Demonstrate skill in the admission and discharge process, maintenance of safe environment and records and reports	Nursing care of the patient a) Patient Environment in the hospital: Patients unit b) Therapeutic environment - Physical factors – lighting temperature, ventilation, humidity, noise, pestilence. - Safety needs, prevention of environmental hazard - Psychosocial and aesthetic factors. c) Patient's Adjustment to the Hospital. - Understanding the patient as a person, socio-economic, and cultural background, health status etc. - Effect of hospitalization on patient and family. - Admission, transfer, discharge procedures d) Basic Nursing Skills- - Communication - Nursing interview - Recording and reporting e) Nursing Process - Meaning and importance - Assessment, Nursing diagnosis Planning, Implementation and Evaluation - Nursing care plan.	6	Lecture cum discussions. Demonstration of maintaining the records and reports Role Play	Short answer Objective type Essay type Return demonstration

Unit. No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
III	Describe basic needs of the patient Demonstrate skill in meeting basic care of the patient	Meeting the Basic Needs of a patient a) Physical needs- - Comfort, rest, sleep and exercise –Importance and its promotion - Body mechanics –moving, lifting, transferring - Position and posture maintenance - Comfort devices - Beds and bed making – Principles of bed making, types and care of bed linen - Safety devices, restraints and splints - Exercises – Active and Passive b) Hygienic needs - Personal and environmental hygiene personal - Nurses note in maintaining personal and environmental hygiene. - Care of eyes, nose, ears, hands and feet. - Care of mouth, skin, hair and genitalia - Care of pressure areas, bed sores. c) Elimination needs - Health and sickness - Problems – constipation and diarrhea, retention and incontinence of urine. - Nurse's role in meeting elimination needs. - Offering bed-pan and urinal, - Observing and recording abnormalities. - Preparation and giving of laxative, suppositories, enemas, bowel wash, flatus tube. - Perineal care, care of patient with urinary catheter, diapers. - Maintenance of intake and output records d) Nutritional needs - Diet in health and disease - Factors affecting nutrition in illness, - Nurse's role in meeting patients nutritional needs. - Modification of diet in illness. - Diet planning and serving. - Feeding helpless patients including artificial methods of feeding. e) Psychological and spiritual needs	65	Lecture cum discussion Demonstration	Short answer Objective type Essay type Return demonstration Assessment using checklist

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		- Importance - Nurse's role -Diversional and Recreational therapy f) Care of terminally ill and dying patient - Dying patient's signs and symptoms needs of dying patient and family, - Nursing care of dying-: special considerations; advance directives, euthanasia, will, dying declaration, organ donation etc. - Medico legal issues - Care of the dead body - Care of unit - Autopsy - Embalming			
IV	Describe the principles of assessment demonstrate skills in assessing the patient	Assessment of patient/client a) Physical Assessment - Importance, principles, methods of assessment - Height, Weight, posture - Head to toe examination. b) Physiological Assessment - Vital signs, normal, abnormal Characteristics, factors influencing the variations, - Observation and collection of specimens-urine, stool, vomitus and sputum. c) Psychological Assessment - Mood, Intelligence, Emotions Normal and Abnormal behavior.	14	Lecture cum discussions Demonstration	Short answer Objective type Essay type Return demonstration Assessment using checklist
V	Describe the infection control, methods in the clinical setting. Demonstrate infection control practices	Infection control a) Infection control : - Nature of infection - Chain of infection transmission - Defence against infection: natural and acquired - Hospital acquired infection (nosocomial infection) b) Concept of asepsis: - Medical and surgical asepsis - Isolation precautions , barrier nursing - Hand washing : simple, hand asepsis, surgical asepsis (scrub) - Isolation – source and protection - Personal protective equipments types, uses and techniques of wearing and removing		Lecture cum discussion Demonstration Explain using manual of biomedical waste management of Government of India Demonstration Videos Simulation exercises	Short answers Essay type Objective type

Unit. No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		- Decontamination of unit and equipment - Transportation of infected patient - Standard safety precaution - Transmission based precautions c) Bio-medical waste management - Importance - Types of hospital wastes - Hazards associated with hospital waste - Decontamination of hospital waste - Segregation and transportation - Disposal	20		
VI	Describe therapeutic nursing care	Therapeutic Nursing Care - Care of patients with respiratory problems/dyspnea - Deep breathing and coughing exercises - O2 inhalation - Dry and moist inhalation - Oro nasal suctioning - Care of patient with altered body temperature-Hot and cold Applications - Care of patients with Fluid and Electrolyte imbalance - Care of unconscious patient - Care of the bed-ridden patient(traction, fractures etc.) - Care of patient with pain - Care of patients with body elimination deviation	30	Lecture cum discussions. Demonstration	Short answer Objective type Essay type Return demonstration Assessment using checklist
VIII	Explain the principles, routes, effects of administration of medications	Introduction to clinical Pharmacology Administration of medication: - General Principles/Considerations - Purposes of medication - Principles: Rights, special considerations, prescriptions, safety in administering medications and medication errors - Drugs forms - Routes of administration - Storage and maintenance of drugs and nurses responsibility - Broad classification of drugs - Therapeutic effect, side effect, toxic effect, allergic reaction, drug tolerance, drug interactions - Factors influencing drug actions - Systems of drug measurement: metric system, household measurements.	30	Lecture cum discussions. Demonstration	Short answer Objective type Essay type Return demonstration Assessment using checklist

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		- Converting measurements units: conversion within one system, between systems, dosage calculations. - Terminologies and abbreviations used in prescription of medications. b) Oral drug administration: oral, sublingual, buccal : equipment and procedure. c) Parenteral: - General principles - Types of parenteral therapies. - Types of syringes, needles, canulas and infusion sets. - Protection from needle stick injuries, giving medications with a safety syringe. - Routes of parenteral therapies: - Purposes, site equipment, procedure and special considerations in giving intradermal, subcutaneous, intramuscular and intravenous medications. - Advanced techniques : epidural, intrathecal, intraosseous, intraperitoneal, intrapleural, intra arterial - Role of nurse d) Topical administration: purposes, site, equipment, procedure, special considerations for applications to skin and mucous membrane. e) Direct application: - Gargle, throat swab - Insertion of drug into body cavities : nasal pack, suppositories / medicated packing into rectum / vagina - Instillations: ear, eye, nasal, bladder and rectal. - Irrigations: eye, ear, bladder, vaginal and rectal. Spray: nose and throat f) Inhalations: nasal, oral, endotracheal, tracheal (steam, oxygen and medications) – purposes, types, equipment, procedure and special considerations. g) Recording and reporting of medications administered.			

FIRST AID

Course Description

This course is designed to help students develop and understanding of community emergencies and be able to render first aid services as and when need arises.

General Objectives

Upon completion of this course, the students shall be able to:

1. Describe the rules of first aid.
2. Demonstrate skills in rendering first aid in case of emergencies.

Total Hours - 20

Unit	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
I	Describe the importance and principle of first aid	Introduction a) Definition, Aims and Importance of first aid b) Rules/ General principles of First Aid c) Concept of emergency	2	Lecture cum discussions	Short answer Objective type
II	Demonstrate skill in first aid techniques	Procedures and Techniques in First Aid a) Preparation of First Aid kit. b) Dressing, bandaging and splinting(spiral, reverse spiral, figure of 8 spica, shoulder, hip, ankle, thumb, finger, stump, single and double eye, single and double ear, breast, jaw, capelin), triangle bandage uses, abdominal binder and bandage, breast binder, T and many tail bandage, knots reef, clove. c) Transportation of the injured d) CPR : Mouth to mouth, Sylvester, Schafer, External cardiac massage	8	Lecture cum discussions Demonstration Videos Simulation exercises.	Short answer Objective type Return demonstration
III	Describe first aid in common emergencies	First Aid in emergencies a) Asphyxia, drowning, shock b) Wounds and Bleeding c) Injuries to the Bones, Joints and Muscle - fractures, sprains, strains, hanging, falls	6	Lecture cum discussions. Videos Demonstration	Short answer Objective type Return demonstration

Unit	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
		d) Burns and scalds e) Poisoning – ingestion, inhalation, bites and stings f) Foreign body in eye, ear, nose and throat.			
IV	List various community emergencies and community resources.	Community Emergencies & Community Resources a) Fire, explosion, floods, earth-quakes, famines etc b) Role of nurses in disaster management c) Rehabilitation d) Community Resources - Police, Ambulance services - Voluntary agencies-local, state national and international	4	Lecture cum discussions. Videos Mock drill Simulation exercise Videos Field visit to voluntary agencies.	Short answer Objective type Essay type

NUSING FOUNDATIONS- PRACTICAL

Placement: FIRST YEAR

Time: Practical – 880 hours

Lab - 200 hours

Clinical – 680 hours

Course Description: This course is designed to help the students to acquire knowledge, attitude and skills in techniques of nursing and practice them in clinical settings

The nurse on completion of this course will be able to:

- ☐ Demonstrate appropriate attitudes and skills in providing comprehensive nursing care to patients based on nursing process.
 - Assess the nursing needs of the clients by collecting complete data, making relevant observation and analyze the data collected.
 - Plan for appropriate nursing care by prioritizing the needs and executing competent nursing actions.
 - Implement effective nursing care by integrating scientific principles for maintaining health optimum
 - Promote the health of the individual and the community by giving appropriate health teaching.
 - Evaluate the patients response to nursing care provided.
 - Apply the theoretical knowledge to the appropriate clinical nursing practice.
 - Demonstrate skill in the use of problem solving methods in nursing practice.
 - Contribute for promotion of health prevention of illness & restoration of health of people by working with other health team members.
 - Gain knowledge of health resources in the community and the country.
 - Demonstrate leadership skills in working with health team, community and others in the provision of health care.
 - Recognize the need for continuing education for professional development.
 - Demonstrate use of ethical values in their personal and professional life.
 - Assist in research activities.

Areas	Time (Hours)	Objectives	Skills	Assignments	Assessment methods
Supervised practice in Lab General Medical and surgery wards	200 680 (Minimum practice time in clinical area)	- Performs admission and discharge procedure - Prepares nursing care plan as per the nursing process format - Communicates effectively with patient, families and team members and - Maintains effective human relations	Hospital admission and discharge a) Admission: - Prepare Unit for new patient - Prepare admission bed - Perform admission procedure - New patient - Transfer in - Prepare patient records b) Discharge/Transfer out - Gives discharge counseling - Perform discharge procedure (Planned discharge, LAMA and abscond, Referrals and transfers) - Prepare records of discharge/transfer - Dismantle, and disinfect unit and equipment after discharge/transfer Perform assessment: - History taking, Nursing diagnosis, problem list, Prioritization, Goals & Expected Outcomes, selection of interventions - Write Nursing Care Plan - Gives care as per the plan Communication - Use verbal and non verbal communication techniques Prepare a plan for patient teaching session	- Practice in Unit/ hospital - Write nursing process records of patient - Simulated -1 - Actual - 1 - Role-plays in simulated situations on communication techniques-1 - Health talk-1	- Evaluate with checklist - Assessment of clinical performance with rating scale - Completion of Practical record - Assessment of nursing process records with checklist - Assessment of actual care given with rating scale - Assess role plays with the checklist on communication techniques - Assess health talk with the checklist - Assessment of comm.-unication techniques by rating scale

Areas	Time (Hours)	Objectives	Skills	Assignments	Assessment methods
		• Develops plan for patient teaching • Prepares patient reports • Presents reports • Monitors vital signs • Performs health assessment of each body system • Provides basic nursing care to patients	Write patient report • Change-of shift reports, • Transfer reports, Incident reports etc. • Present patient report Vital signs • Measure, records and interpret alterations in body temperature, pulse, respiration and blood pressure Health assessment • Health history taking • Perform assessment: General Body systems • Use various methods of physical examination • Inspection, Palpation, Percussion, Auscultation, Olfaction Identification of system • wise deviations Prepare Patient's unit: • Prepare beds: • Open, closed, occupied, operation, amputation, • Cardiac, fracture, burn, Divided, & Fowler's bed • Pain assessment and provision for comfort Use comfort devices Hygienic care: • Oral hygiene: • Baths and care of pressure points • Hair wash, Pediculosis treatment	• Write nurses notes and present the patient report of 2-3 assigned patients • Lab practice • Measure Vital signs of assigned patient • Practice in lab & hospital	• Assessment of performance with rating scale • Assessment of each skill with checklist • Completion of activity record

Areas	Time (Hours)	Objectives	Skills	Assignments	Assessment methods
			Feeding: • Oral/ Enteral, Naso/Orogastric, gastrostomy and Parenteral feeding • Naso-gastric tube insertion, suction, and irrigation Assisting patient in urinary elimination • Provide urinal/bed pan • Condom drainage • Perineal care • Catheterization • Care of urinary drainage Bladder irrigation Assisting bowel Elimination: • Insertion of Flatus tube • Enemas • Insertion of Suppository Bowel wash Body Alignment and Mobility: • Range of motion exercises • Positioning: Recumbent, Lateral, Fowlers, Sims, Lithotomy, Prone, Trendelenburg position- • Assist patient in Moving, lifting, transferring, walking • Restraints Oxygen administration • Mask • Prongs • Tent • Catheters Suctioning: oropharyngeal, nasopharyngeal Chest physiotherapy and postural drainage Care of Chest drainage CPR- Basic life support Observation of Intravenous therapy	• Simulated exercise on CPR manikin	

Areas	Time (Hours)	Objectives	Skills	Assignments	Assessment methods
			Blood and blood component therapy Collect/assist for collection of specimens for investigations Urine, sputum, faeces, vomitus, blood and other body fluids Perform lab tests: • Urine: sugar, albumin, acetone • Blood: sugar (with strip/ gluco-meter) Application of hot and cold therapies: • Local and general • Dry and moist Communicating and assisting with self-care of visually & hearing impaired patients Communicating and assisting with self-care of mentally challenged/disturbed patients Recreational and diversional therapies Caring of patient with alteration in sensorium		
		• Performs infection control procedures	Infection control • Perform following procedures: • Hand washing techniques • Simple, hand antisepsis and surgical antisepsis (scrub) • Prepare isolation unit in lab/ ward	• Observation study -2 • Department of Infection control & CSSD • Visits CSSD write observation report I	• Assess observation study with checklist • Evaluate all procedures with checklist

Areas	Time (Hours)	Objectives	Skills	Assignments	Assessment methods
		• Practice technique of wearing and removing Personal protective equipment (PPE) • Practice Standard safety precautions (Universal precautions) Decontamination of equipment and unit: • Surgical asepsis: • Sterilization • Handling sterilized equipment • Calculate strengths of solutions, • Prepare solutions • Care of articles • Provide care to pre and post-operative patients • Perform procedures for care of wounds Administers drugs	• Practice technique of wearing and removing Personal protective equipment (PPE) • Practice Standard safety precautions (Universal precautions) Decontamination of equipment and unit: • Surgical asepsis: • Sterilization • Handling sterilized equipment • Calculate strengths of solutions, • Prepare solutions • Care of articles Pre and post-operative care: • Skin preparations for surgery: Local • Preparation of Post-operative unit • Pre & post- operative teaching and counselling. • Pre and post-operative monitoring • Care of the wound: • Dressings of minor wounds, care of Drainage / Application of Binders, Splints & Slings • Bandaging of various body parts Administration of medications • Administer Medications in different forms and routes • Oral, Sublingual and Buccal • Parenteral : Intradermal, subcutaneous, Intramuscular etc. • Assist with Intravenous medications	• Collection of samples for culture • Do clinical posting in infection control department and write report • Practice in lab/ward	

		• Drug measurements and dose calculations • Preparation of lotions and solutions • Administer topical applications • Insertion of drug into body cavity: Suppository & medicated packing etc. • Instillation of medicines into Ear, Eye, Nose and throat • Irrigations: Eye, Ear, bladder, Vagina and Rectum • Inhalations: dry and moist • Medicated/Nebulization • Identification of spurious drugs. • Record date, time, medication, dose, route And sign immediately after administration		
		• Provide care to dying and dead • Counsel and support relatives	Care of dying patient • Provide care for the terminally ill • Caring and packing of dead Body • Counseling and supporting grieving relatives • Handing over the body & valuables • Transferring to mortuary with proper identification • Terminal care of the unit	

COMMUNITY HEALTH NURSING

Placement- FIRST YEAR

Time- 180 hours

CHN-I – 80 hours

Environmental Hygiene- 30 hours

Health Education & Communication skills- 40 hours

Nutrition- 30hours

COMMUNITY HEALTH NURSING – I

Course Description

This course is designed to help students gain an understanding of the concept of community health in order to introduce them to the wider horizons of rendering nursing services in a community set – up, both in urban and rural areas.

General Objectives

Upon completion of this course, the students shall be able to:

- 1 Describe the concept of health, community health and community health nursing.
- 2 State the principles of epidemiology and epidemiological methods in community health nursing practice.
- 3 Explain the various services provided to the community and role of the nurse.
- 4 Demonstrate skills to practice effective nursing care of the individuals and families in the clinics as well as in their homes, using scientific principles.

Total Hours – 80

Unit No.	Learning Objectives	Content	Hr	Teaching Learning activities	Method of Assessment
I	Describe the concept of health and disease and community health	Introduction to Community Health a) Definitions: Community, Community health, community health nursing b) Concept of Health and disease, dimensions and indicators of health, Health determinants c) History & development of Community Health in India& its present concept. d) Primary health care, Millennium Development Goals e) Promotion and maintenance of Health	10	Lecture cum discussions.	Short Answers

Unit No.	Learning Objectives	Content	Hr	Teaching Learning activities	Method of Assessment
II	Explain various aspects of Community Health Nursing. Demonstrate skills in applying nursing process in Community Health Nursing settings	Community Health Nursing a) Philosophy, goals, objectives & principles, concept and importance of Community Health Nursing, b) Qualities and functions of Community Health Nurse c) Steps of nursing process: community identification, population composition, health and allied resources, community assessment, planning & conducting community nursing care services.	14	Lecture cum discussions.	Short answers Essay type
III	Demonstrate skill in assessing the health status and identify deviations from normal parameters in different age groups.	Health Assessment a) Characteristics of a healthy individual b) Health assessment of infant, preschool, school going, adolescent, adult, antenatal woman, postnatal woman, and elderly.	10	Lecture cum discussions. Demonstration Role Play Videos	Short answers Objective type Essay type Return demonstration
IV	Describe the principles of epidemiology and epidemiological methods in community health nursing practice.	Principles of Epidemiology and Epidemiological methods a) Definition and aims of epidemiology, communicable and non-communicable diseases. b) Basic tools of measurement in epidemiology c) Uses of epidemiology d) Disease cycle e) Spectrum of disease f) Levels of prevention of disease. g) Disease transmission – direct and indirect. h) Immunizing agents, immunization and national immunization schedule. i) Control of infectious diseases. j) Disinfection.	10	Lecture cum discussions. Non-communicable disease module of government of India. Field visit	Short answers Objective type Essay type
V	Demonstrate skill in providing comprehensive nursing care to the family.	Family Health Nursing Care a) Family as a unit of health b) Concept, goals, objectives c) Family health care services d) Family health care plan and nursing process.	12	Lecture cum discussions. Role play Family visit	Short answers Essay type

Unit No.	Learning Objectives	Content	Hr	Teaching Learning activities	Method of Assessment
		e) Family health services – Maternal, child care and family welfare services. f) Roles and function of a community health nurse in family health service. g) Family health records.			
VI.	Describe the principles and techniques of family health care services at home and in clinics.	Family Health Care Settings Home Visit: a) Purposes, Principles b) Planning and evaluation c) Bag technique d) Clinic: Purposes, type of clinics and their functions e) Function of Health personnel in clinics	10	Lecture cum discussions. Demonstration Visits – Home, health center	Short answer Return demonstration
VII	Describe the referral system and community resources for referral	Referral System a) Levels of health care and health care settings. b) Referral services available c) Steps in referral. d) Role of a nurse in referral	6	Lecture cum discussions. Mock drill	Short answer Objective type
VIII	List the records and reports used in community health nursing practice	Records and reports a) Types and uses b) Essential requirements of records and reports c) Preparation & Maintenance	3	Lecture cum discussions. Exhibit the records.	Short answer Objective type
IX.	Explain the management of minor ailments.	Minor Ailments a) Principles of management b) Management as per standing instructions/orders.	5	Lecture cum discussions.	Short answer Objective type

COMMUNITY HEALTH NURSING I- PRACTICAL

Placement: FIRST YEAR

Time: Practical – 320 hours (8 weeks)

Areas	Duration	Objectives	Skills	Assignments	Assessment methods
Community health Nursing - urban / rural	8 weeks	a) Organize home visit b) Prepare bag and demonstrate bag technique. c) Build up and maintain rapport with family. d) Identify needs of community e) Practice procedure f) Make referrals. g) Plan and conduct health education on identified health needs. h) Set up clinics with help of staff. i) Maintain records and reports j) Collect and record vital health statistics. k) Learn about various organizations of community health importance. l) Health Assessment family m) Identify the health needs of various age groups. n) Assess the environment o) Maintain family folders. p) Assessment nutritional needs q) Demonstrate different method of preparing food according to the nutritional need of family.	• Conducting Home visits. • Nutritional assessment of individuals. • Provide care at home as per Standing Orders / protocol. • Conduct health Education. • Set up of different Clinics. • Maintain Records & Reports. • Practice family health nursing. • Demonstrate different methods of preparation of Meals.	• Daily Diary • Health talk -2 • Family care plan based on family study -2. • Health assessment of an individual -2 • Community Profile – 2 • Report of visit to water purification plant, sewage plant, milk dairy, panchayat.	• Assess clinical performance with rating scale. • Evaluation of daily diary, health talk, family care plan, health assessment, community profile, observation report.

ENVIRONMENTAL HYGIENE

Course Description

This course is designed to help students acquire the concept of health, understanding of the principles of environmental health and its relation to nursing in health and disease.

General Objectives

Upon completion of this course, the students shall be able to:

- 1 Describe the concept and principles of environmental health.
- 2 Demonstrate skills to apply the principles of environmental hygiene in caring for self and others.
- 3 Describe the environmental health hazards, related health problems and the services available to meet them.

Total Hours – 30

Unit.	Learning Objectives	Content Unit wise	Hr	Teaching learning activities	Method of assessment
I	Explain the importance of healthy environment and its relation to health and disease.	Introduction a) Components of environment b) Importance of healthy environment	2	Lecture cum discussions.	Short answer
II	Describe the environmental factors contributing to health and illness.	Environmental Factors Contributing to Health a) Water : - Sources and characteristics of safe and wholesome water - Uses of water. - Rain water harvesting - Water pollution – natural and acquired impurities - Water borne diseases - Water purification-small and large scale b) Air : - Composition of air - Airborne diseases - Air pollution and its effect on health - Control of air pollution and use of safety measures.	22	Lecture cum discussions Demonstration Exhibits Visit to water Purification plant, sewage treatment plant	Short answers Objective type Essay type

Unit.	Learning Objectives	Content Unit wise	Hr	Teaching learning activities	Method of assessment
		c) Waste : - Refuse – garbage, excreta and sewage - Health hazards - Waste management: collection, transportation and disposal. d) Housing: - Location - Type - Characteristics of good housing - Basic amenities - Town planning e) Ventilation: - Types and standards of ventilation f) Lighting: - Requirements of good lighting - Natural and artificial lighting - Use of solar energy g) Noise - Sources of noise - Community noise levels - Effects of noise pollution - Noise Control measures h) Arthropods: - Mosquitoes, housefly, sand fly, human louse, rat fleas, rodents, ticks etc. - Control measures			
III.	Describe the community organization to promote environmental health.	Community organizations to promote environmental health a) Levels and types of agencies: - National, state, local - Government, voluntary and social agencies. b) Legislations and acts regulating the environmental hygiene.	6	Lecture cum discussions.	Short answer Objective type.

HEALTH EDUCATION AND COMMUNICATION SKILLS

Course Description

This course is designed to help students to

1. Acquire the concept of health education and develop an ability to select and/or prepare appropriate audio-visual aids and use them effectively to communicate with the individuals and community
2. Understand the principles of communication and counseling, and its application in nursing practice.

General Objectives

Upon completion of this course, the students shall be able to:

1. Describe the concept of health education, communication skills including soft skills, audio – visual aids and health education agencies.
2. Identify and utilize opportunities for health education.
3. Describe the application of information technology in preparation and use of various health teaching aids.
4. Develop effective communication and counseling skills.

Total Hours – 40

Unit.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
I	Describe the concept and different aspects of communication	Communication Skills a) Definition, process, purposes, principles, types and importance of communication b) Barriers in communication c) Establishment of successful communication. d) Observing and listening skills.	8	Lecture cum discussions. Demonstration Role play	Short answers Objective type Return demonstration
II	Describe the aims and objectives, scope, levels, approaches and principles of health education	Health Education a) Concept, definition, aims and objectives of health education b) Principles of health education c) Process of change/modification of health behavior d) Levels and approaches of health education e) Methods of health education f) Scope and opportunities for health education in hospital and community g) Nurse's role in health education.	6	Lecture cum discussions.	Short answers Objective type

Unit.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
III	Demonstrate the skills of counseling.	Counseling a) Definition, purpose, principles, scope and types b) Counseling process: steps and techniques c) Qualities of a good counselor d) Difference between health education and counseling e) Role of nurse in counseling	8	Lecture cum discussion Role play	Short answer Essay type.
IV	Describe the types of AV aids. Demonstrate skill in preparing and using different kinds of audio – visual aids	Methods and Media of Health Education a) Definition, purpose and types of audio-visual aids and media b) Selection, preparation and use of audio-visual aids : graphic aids, printed aids, three dimensional aids and projected aids c) Advantages and limitations of different media d) Preparation of health education plan	18	Lecture cum discussions Exhibits, Demonstration	Evaluation of prepared audio visual aids. Written test

NUTRITION

Course Description

This course is designed to help students understand that nutrition is an integral component of health as nutrients play a vital role in the growth, development and maintenance of the body.

General Objectives

Upon completion of this course, the students shall be able to:

- 1 Describe the principles of nutrition and dietetics and its relationship to the human body in health and disease.
- 2 Describe the balanced diet in promotion of health
- 3 Apply this knowledge in providing therapeutic diet in care of the sick.
- 4 Demonstrate skills in selection, preparation and preservation of food.

Total Hours – 30

Unit.	Learning Objectives	Content	Hr.	Teaching learning activities	Methods of assessment
I	Describe the relationship between nutrition and health	Introduction a) Meaning of food, nutrition, nutrients etc. b) Food Habits and customs c) Factors affecting nutrition d) Changing concepts in food and nutrition. e) Relation of Nutrition to Health	2	Lecture cum discussions. Explain using charts	Short answer types Objective type
II	Describe the classification of food.	Classification of food a) Classification by origin: - Food and animal origin - Food of plant origin b) Classification by chemical composition and sources - Carbohydrates - Proteins - Fats - Minerals - Vitamins - Water c) Classification by predominant functions - Body building food - Energy giving food - Protective food	2	Lecture cum discussions. Real food items Exhibits charts	Short answers Objective type Essay type

Unit.	Learning Objectives	Content	Hr.	Teaching learning activities	Methods of assessment
		d) Classification by nutritive value - Cereals and millets - Pulses and legumes - Vegetables - Nuts and oil seeds - Fruits - Animal food - Fats and oils - Sugar and jiggery - Condiments and spices - Miscellaneous food			
III	Explain normal dietary requirements Demonstrate skill in calculating normal food requirements.	Normal Dietary Requirements a) Energy: Calorie, Measurement, Body Mass Index, Basal Metabolic Rate – determination and factors affecting b) Balanced Diet – nutritive value of foods, calculation for different categories of people, normal food requirement calculation. Menu plan. Combination of food affecting and enhancing the nutritive value of the diet. c) Budgeting for food, low cost meals, food substitutes. d) Diseases and disorders caused by the imbalance of nutrients. e) Food allergy – causes, types, diet modifications in gluten, lactose and protein intolerance etc. f) Food intolerance - inborn errors of metabolism	4	Lecture cum discussions. Charts exhibits Real food Practical exercise	Short answer Objective type Essay type
IV	Describe the principles and various methods of preparation, preservation and storage of food.	Food Preparation, Preservation & Storage a) Principles of cooking, methods of cooking and the effect of cooking on food and various nutrients. Safe food handling, health of food handlers.	2	Lecture cum discussions. Field visit to food processing unit.	Short answer type Objective type

Unit.	Learning Objectives	Content	Hr.	Teaching learning activities	Methods of assessment
		b) Methods of food preservation—household and commercial, precautions. c) Food storage – cooked and raw, household and commercial, ill effects of poorly stored food. d) Food adulteration and acts related to it.		Demonstration exhibits	Evaluation of exhibit preparation.
V	Describe about therapeutic diet	Therapeutic Diet a) Diet modification in relation to medical and surgical condition of the individual such as Protein Energy Malnutrition (PEM), Diabetes, Cardio Vascular disease, Hepatitis, Renal, Gouts, Irritable Bowel Syndrome (IBS), Obesity, cholecystectomy, partial gastrectomy, gastrostomy, bariatric surgery and colostomy etc. b) Special diet – low sodium diet, fat free diet, diabetic diet, bland diet, high protein diet, low protein diet, low calorie diet, geriatric diet, iron rich diet, liquid diet, semi-solid diet, soft diet and high fiber diet etc. c) Factors affecting diet acceptance, feeding the helpless patient. d) Health education on nutrition needs and methods in diet modification.	8	Lecture cum discussions. Practical of planning Therapeutic diet Demonstration Charts Exhibits	Short answers Objective type Essay type
VI	Describe the concept of community nutrition	Community Nutrition a) Nutritional problems and programs in India b) Community food supply, food hygiene and commercially prepared and grown food available locally. c) National and international food agencies – Central food training research institute (CFTRI), Food and agriculture organization	4	Lecture cum discussions. Videos Government of India nutrition manuals.	Short answer Objective type

Unit.	Learning Objectives	Content	Hr.	Teaching learning activities	Methods of assessment
		(FAO), National Institute of Nutrition (NIN), Food Safety and Standards Authority of India (FSSAI), CARE (Cooperative for Assistance and Relief Everywhere), National Institute of Public Cooperation and Child Development (NIPCCD) etc.		Visit to the local food preparation / processing agency.	
VII	Demonstrate skill in preparation of common food items.	Preparation of diet / practical a) Beverages: hot and cold, juice, shakes, soups, lassi, barley water b) Egg preparation: egg flip, scramble, omlet, poached egg c) Light diet: porridges, gruel, khichari, dahlia, kanji, boiled vegetables, salads, custards. d) Low cost high nutrition diets - chikki, multigrain roti	8	Lecture cum discussions Cookery practical	Practical evaluation

ENGLISH

Placement- FIRST YEAR

Time- 30 hours

Course Description

This course is designed to help students develop an ability to comprehend spoken and written English, so as to communicate effectively.

General Objectives

Upon completion of this course, the students shall be able to:

- 1 Read and write correct English.
- 2 Communicate effectively in English.

Total Hours-30

Unit	Learning Objective	Content	Hr.	Method of Teaching	Assessment Method
I.	Speak and write correct grammatical English	Grammar a) Review of basic grammar b) Building Vocabulary	6	Discussion, written and oral exercises.	Objective type Paraphrasing
II	Develop ability to read, understand and write in English	Composition a) Sentence construction and usage. b) Reading comprehension. c) Written composition : paragraphs & essays, precise writing, story writing & comprehension, letter writing, nurses notes and reports, anecdotal records, diary writing	14	Discussion Written and oral exercises.	Dictation Exercise Objective type Translation Report evaluation Essay type
III	Demonstrate conversation skills.	Spoken English a) Conversation – face to face and telephonic b) Oral report c) Discussion, debate d) Public speaking skills.	10	Discussion, written and oral exercises.	Extempore Debates Discussion

COMPUTER EDUCATION

Placement- FIRST YEAR

Time- 15 hours

Course Description:-

This course is designed to help students gain a basic understanding of uses of computers and its application in nursing.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe the basic disk operating system.
2. Use computer for data processing
3. Use Micro-soft office programs.
4. Use computer in patient Management System.
5. Use E-mail and internet

Total Hours – 15

Unit	Learning Objectives	Content	Hr.	Teaching learning activities	Assessment methods
I	Describe the structure and purpose of computers and disc operating systems	Introduction to computers and Disk operating system a) Definition b) Classification c) Structure and parts of computer d) Disk operating system – DOS and WINDOWS all versions. e) Purposes / uses of computer is health care delivery system	5	Lecture cum discussion Practical	Short answers Essay type Practical
II	Demonstrate skill in the use of MS office	MS Office a) MS word b) MS excel with pictorial presentation c) MS Power point d) MS access e) MS publisher document	15	Lecture cum discussion Demonstration Practice session	Short answer Objective type Practical exam
III	Demonstrateskill in using multimedia	Multimedia a) Types and uses b) Data base creation, retrieval and report generation c) Computer aided teaching and testing	5	Lecture cum discussion Demonstration	Short answer Objective type Practical exam
IV	Demonstrate the use of internet and e-mail	Use of internet and e-mail a) Accessing the website b) Searching the internet for content c) Accessing the email and communicating with the help of it. d) Use of internet communication programs – skype	10	Lecture cum discussion Demonstration	Short answer Objective type Practical exam

MEDICAL SURGICAL NURSING- I

Placement- SECOND YEAR

Time- 120 hours

Course Description:-

This course shall help students understand the concept of disease and disease process. Students shall be able to gain knowledge and develop understanding of various medical, surgical disorders and disease. They shall be able to give comprehensive nursing care to patient with these diseases.

General Objective:-

Upon completion of this course, the students shall be able to:

1. Describe the cause, symptoms, treatment and prevention of Medical Surgical Diseases.
2. Demonstrate skill in carrying out nursing technique and procedures with the application of scientific principles.
3. Discuss nursing process and provide nursing care to patients with medical surgical/ diseases.

Total Hours - 120

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
I	Explain the history of modern Medicine and Surgery	Introduction a) Brief history of evolution of modern medicine and surgery b) Theories of illness and its causation -Illness as human experience c) Review of Nursing process and Nursing care plan.	2	Lecture cum discussion	Short answer Objective type
II	Demonstrate skill in conducting health assessment and physical examination	Nursing assessment a) Health Assessment - Health history - Physical examination - Nutritional assessment - General clinical investigations	4	Lecture cum discussion Demonstration Simulation	Short answer Objective type Return demonstration
III	Describe the pathophysiological mechanism of diseases	Pathophysiological mechanism of disease a) Stress adaptation stressors, management, Nursing interventions b) Inflammation c) Defense against injury d) Nutritional consideration	2	Lecture cum discussion Topic presentation	Short answer Essay type
IV	Demonstrate skill in providing nursing care to patients with altered immune response.	Altered immune response a) Overview of normal immune system b) Altered immune response, hypersensitivity and allergy c) Assessment of immune system d) Diagnostic evaluation e) Allergy disorders: - Anaphylaxis - Allergic rhinitis - Contact dermatitis - Atopic dermatitis	6	Lecture cum discussion Clinical case presentation	Short answer Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
		- Drug reactions - Food allergy - Serum sickness - Latex allergy f) Approaches to treat allergic diseases g) Nursing management client with altered immune response h) Auto immune disease - Rheumatoid arthritis - SLE - Ankylosing spondylitis - Graft versus host disease			
V	Demonstrate skill in management of client with fluid and electrolyte imbalance.	Fluid and electrolyte balance and imbalance a) Water contents of body, electrolyte and Acid – Base balance b) Homeostasis c) Review mechanism of regulating fluid and electrolyte movement d) Fluid and electrolyte Acid-Base imbalance and its management	4	Lecture cum discussion Demonstration	Short answer Objective type Essay type Return demonstration
VI	Describe physical set up of OT and its equipments. Demonstrate skill in theatre techniques.	Operation theatre technique: a) Physical Environment - Operation theatre room - cleaning of tables, trolleys, lights and other equipments - Pre-operative holding areas. b) Theatre Technique - Scrubbing – Hand washing - Gowning - Gloving - Positioning of patient for various surgical procedures. - Draping of patient. c) Preparation of theatre, equipment and supplies - Cleaning - Needles, sutures – types and their uses. - Carbolization, ETO sterilization, fumigation, OT swab, Bacillocid sterilization. - Packing and sterilization of dressings, linen rubber ware suture material, instruments, needles and other materials.	8	Lecture cum discussion Explain about the instruments Demonstration of OT techniques – scrubbing, gowning, gloving Positioning and draping Visit to CSSD	Short answer Objective type Essay type Return demonstration
VII	Demonstrate skill in preparing the client for surgery. Recognize and perform the role of nurse during surgery.	Management of patient undergoing surgery a) Pre operative preparation and care - Physical - Psychological, - Pre-medications - Legal and ethical b) Intra operative management - Surgical Team - Nursing activities and responsibilities - Anesthetic agents - Role of nurse in anesthesia	8	Lecture cum discussion Demonstration Videos	Short answer Objective type Essay type Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
	Demonstrate skill in giving care to clients after surgery (post-operative care)	c) Post operative Management - Immediate care - Transferring patient from operation theatre - Patient in recovery room - Recovery from Anesthesia - Post operative observation and nursing management - Carryout the post operative orders. - Postoperative complication observation, prevention & management.			
VIII	Demonstrate skills in the nursing management of client with impaired respiratory function and gaseous exchange	Nursing management of patient with impaired respiratory function and gaseous exchange - Assessment of respiratory function - History - Physical examination - Diagnostic evaluation - Care of patient in respiratory intensive care and ventilator care and respiratory function - Management of Patient with disorders of upper respiratory airway: - Obstruction of upper airway - Epistaxis - Sinusitis - Pharyngitis - Tonsillitis - Laryngitis - Deviated nasal septum - Management of patient with disorders of the chest and lower respiratory tract - Management of patient with impaired • Lung abscess - Empyema - Bronchial asthma - COPD - Pneumothorax - Pneumonia - Bronchitis - Bronchiectasis - Trauma - Pulmonary Tuberculosis/DOTS - Pulmonary embolism - Pulmonary edema - Lung tumors - Disorders of pleura and pleural space - Lung surgery - Respiratory failure - Acute respiratory distress syndrome. - SARS - Alternate therapies - Drugs used in treatment of disorder of respiratory system	15	Lecture cum discussion Demonstration of various artificial respiratory devices Simulation Case discussion Videos and Films	Short answer Objective type Essay type Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
IX	Describe the various gastro intestinal disorders. Demonstrate skill in providing care for clients with gastro intestinal disorders.	Nursing management of patient with gastro intestinal disorders a) Assessment of gastro intestinal function - History - Physical examination - Diagnostic evaluation b) Management of Upper gastrointestinal disorders - Parotitis - Stomatitis - Glossitis - Gingivitis - Pyorrhea - Dental caries - Halitosis - Dysphagia - Achalasia-cardia - Gastro Esophageal Reflux Disease (GERD) - Cancer of esophagus - Hiatus hernia - Gastritis - Gastric and duodenal ulcers - Gastric cancer - Gastroenteritis - Esophageal fistula - Peritonitis c) Care of patient with gastro intestinal intubation and special nutritional management. d) Management of patient with lower gastro intestinal disorders: - Helminthiasis - Constipation - Diarrhea - Fecal incontinence - Irritable Bowel Syndrome (IBS) - Appendicitis - Diverticular disease - Crohn's disease - Ulcerative colitis - Intestinal obstruction - Colitis - TB abdomen - Colorectal cancer - Polyps of colon and rectum - Ano rectal abscess - Anal fistula and fissure - Hemorrhoids e) Alternate therapies f) Drugs used in treatment of GI disorders	18	Lecture cum discussion Visit to endoscopy room, radiology department Demonstration Films and Videos	Short answer Objective type Essay type Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
X	Describe the management of patients with metabolic and endocrinal disorders. Demonstrate skills in caring for the clients with metabolic and endocrinal disorders.	Nursing management of patients with metabolic and endocrinal disorders: a) Assessment of Hepatic and biliary functions - History - Physical examination - Diagnostic measures b) Management of patients with hepatic disorders - Jaundice - Hepatic cirrhosis - Portal hypertension - Ascites - Hepatic Encephalopathy and coma - Viral hepatitis - Tumors and cyst of the liver - Liver abscess c) Management of patients with biliary disorders - Cholecystitis - Cholelithiasis - Choledocolithiasis - Acute and chronic pancreatitis - Cancer of pancreas d) Assessment of Endocrinal function - History - Physical examination - Diagnostic evaluation e) Management of endocrinal disorders - Pituitary disorders - Thyroid disorders • Hyperthyroidism • Hypothyroidism • Thyroid tumors • Goiter - Parathyroid disorders - Pancreas disorder • Diabetes mellitus - Adrenal disorders • Pheochromocytoma • Addison's disease • Cushing's syndrome - Tumors of the endocrine glands f) Alternate therapies g) Drugs used in treatment of metabolic and Endocrine disorder	15	Lecture cum discussion Charts Simulation Clinical teaching Exposure to diagnostic procedures Videos and Films	Short answer Objective type Essay type
XI	Describe the management of clients with urinary and renal disorders. Demonstrate skill in giving care of client with urinary and renal disorders	Nursing management of renal and urinary disorders a) Assessment of renal and urinary functions - History - Physical examination - Diagnostic evaluation b) Management of patients with renal and urinary disorders - Urinary retention and incontinence - Urinary tract infection	14	Lecture cum discussion Clinical teaching Visit to Dialysis unit Videos and Films	Short answer Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
		- Acute and chronic glomerulonephritis - Pyelonephritis - Urolithiasis - Renal calculi - Trauma of kidney, bladder, urethra, ureters - Urinary strictures - TB of urinary tract - Neurogenic bladder dysfunction - Renal cyst and renal abscess - Nephrotic syndrome - Acute and chronic Renal failure - Uremia - Acute and chronic nephrosis - Tumor – benign and malignant - Care of patient on hemodialysis and peritoneal dialysis - Care of patient with renal transplant c) Assessment of male Genitourinary function - History - Physical examination - Diagnostic evaluation d) Disorders of male genito urinary tract and its management - Hydrocele, - Phimosis - Benign and malignant prostatic hypertrophy - Orchitis - Epididymoorchitis - Cancer penis e) Alternate therapies f) Drugs used in treatment of renal and Urinary disorders			
XII	Describe the nursing management of clients with Neurological disorders	Nursing management of patients with neurological disorders: a) Assessment Neurological functions - History - Physical examination - Diagnostic evaluation b) Management of patients with neurologic dysfunctions - Altered level of consciousness - Increased Intracranial pressure - Intracranial surgery c) Management of patients with neurological disorders - Headache - Migraine - Seizures - Epilepsy - Status epileptics - Cerebrovascular disorder – CVA - Neurological trauma – Head, brain, spinal cord, subdural and extradural hematoma - Neurologic infection ▪ Meningitis	20	Lecture cum discussion Clinical teaching Demonstration of reflexes and use of Glasgow coma scale Simulation Videos and Films Charts	Short answer Objective type Essay type Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment Methods
	Demonstrate skill in giving nursing care to clients with Neurological disorders	- Brain abscess - Encephalitis - Degenerative disorders - Multiple sclerosis - Myasthenia gravis - Guillain – Barre syndrome - Parkinsonism - Alzheimer disease - Neuralgia - Bell's Palsy - Peripheral neuropathies - Brain and spinal cord tumors - Huntington's disease - Muscular Dystrophies - Herniation of the intervertebral disc d) Alternate therapies e) Drugs used in treatment of neurological disorders			
XIII	Describe the management of clients with connective tissue and collagen disorders Demonstrate skill in providing nursing care to clients with connective tissue and collagen disorders	Nursing Management of Patients with Connective Tissue and Collagen Disorders a) Assessment - History - Physical examination - Diagnostic measures b) Management of patients with disorders of connective tissue and collagen disorders - Rheumatoid arthritis - Systemic lupus Erythematosus (SLE) - Scleroderma - Polymyositis - Osteoarthritis - Ankylosing Spondylitis - Gout - Fibromyalgia c) Alternate therapies d) Drugs used in treatment of connective tissue and collagen disorders	8	Lecture cum discussion Clinical teaching	Short answer Objective type Essay type
XIV	Describe the nurse's role in promoting wellness for elderly. Demonstrate skill in providing nursing care for elderly clients.	Nursing management of the elderly a) Assessment of the elderly - Ageing process - Helping and care of elderly in promoting wellness and self care b) Conditions associated with ageing - Dementia - Osteoporosis - Incontinence – urinary - Sensory deprivation c) Home and Institutional care	6	Lecture cum discussion Visit to old age home Videos	Short answer Objective type

MEDICAL SURGICAL NURSING- II

Placement- SECOND YEAR

Time- 120 hours

Course Description:-

This course shall help students understand the concept of disease and disease process, Students shall be able to gain knowledge and develop understanding of various medical surgical specialty disorders and disease. They shall be able to give comprehensive nursing care to patient with these diseases.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe the cause, symptoms, signs, treatment and prevention of diseases classified under medical Surgical Specialties.
2. Demonstrate skill in carrying out nursing technique and procedures with the applicant of scientific principles.
3. Prepare nursing care plan using nursing process and apply it in provide care to patient with these diseases.

Total Hours - 120

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
I	Describe the management of patients with oncology	Oncology Nursing: a) Nursing management of patients with oncological conditions - Structure & characteristics of normal & cancer cells - Nursing Assessment-History and Physical assessment - Prevention, Screening, Early detection, Warning signs of cancer - Epidemiology, Etiology, Classification, Pathophysiology, staging, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management of oncological conditions - Common malignancies of various body systems: Oral, larynx, lung, stomach and Colon, Liver, Leukemias and lymphomas, Breast, Cervix, Ovary, uterus, Sarcoma, Brain, Renal, Bladder, Prostate etc b) Oncological emergencies c) Modalities of treatment - Immunotherapy	15	Lecture cum discussion Explain using charts, graphs models, films, and slides Case discussion Seminar	Short answers Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		- Radiotherapy - Surgical Interventions - Stem cell and Bonemarrow transplants - Gene therapy - Other forms of treatment d) Psychosocial aspects of cancer e) Rehabilitation f) Palliative care: symptom and pain management, Nutritional support g) Home care h) Hospice care i) Stomal Therapy j) Special therapies k) Psycho social aspects l) Nursing procedures m) Alternate therapies n) Drugs used in treatment of oncological disorders		Drug book Lecture cum discussion Topic presentation Posting to cancer Hospital/ unit Structured discussion Seminar	Assessment of skills with check list
II	Describe the disorders of breast and breast cancer. Demonstrate skill in giving nursing care to patients with breast disorders	Nursing Management of patients with disorders of Breast a) Assessment of breast - History - Physical examination - Diagnostic tests - Breast self examination b) Disorders of breast - Mastitis - Breast abscess - Gynaecomastia - Tumors and Malignancy of breast c) Nursing management of a patient after mastectomy.	5	Lecture cum discussion Models and exhibits	Short answer Objective type Essay
III	Describe the various diseases and disorders of integumentary system and their management. Demonstrate skill in providing care to the clients with disorders of integumentary system.	Nursing Management of patient with diseases and disorders of integumentary system a) Nursing Assessment - History - Physical assessment b) Etiology c) Pathophysiology d) Clinical manifestations e) Nursing management of disorders of skin and its appendages - Lesions and abrasions - Infection and infestations Dermatitis - Dermatoses; infectious and Non infectious - Inflammatory dermatoses - Acne Vulgaris	5	Lecture cum discussion Explain using Charts, graphs models, films, slides	Essay type Short answers Object type Assessment of skills with check list

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		- Allergies and Eczema - Psoriasis - Malignant Melanoma - Alopecia - Infestations - Bacterial infections - Pyoderma - Impetigo - Folliculitis - Furuncles - Carbuncles - Viral infections - Herpes zoster - Herpes simplex - Fungal infection - Athlete's foot (Tanta Pedi's) - Parasitic infestation - Pediculosis - Scabies - Pemphigus - Stevens - Johnson syndrome - Skin cancer - Special dermatological therapies f) Burn and its management - Burns Plastic Surgery - Incidence, causes of burns - Types & classification of burns - Pathophysiology - Calculation of the percentage - Local & systematic effects of burns - Immediate care - First aid care - Medical Management, barrier nursing care of the burns - Complications, Health education g) Plastic Surgery - Define plastic & reconstructive surgery - Types - Define skin graft flaps - Possible complication - Preparation of patient for constructive surgery - Post operative care - Health Education h) Alternate therapies i) Drugs used in treatment of integumentary disorders			

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
IV	Describe the disorder and diseases of eye Demonstrate skill in giving care for patients with various eye diseases and disorders.	Ophthalmology And Ophthalmic Nursing a) Review of anatomy and physiology of eye b) Assessment of function of eyes. - History - Physical exam - Diagnostic tests-tonometry, Snellen's chart c) Infections and Inflammations conditions - Blepharitis - Stye - Chalazion - Entropion - Ectropion - Dacrocystitis - Conjunctivitis - Trachoma - Pterygium - Keratitis - Corneal ulcer d) Degenerative Conditions - Cataract - Retinopathy - Retinal detachment e) Miscellaneous - Strabismus - Refractive errors - Tumors - Color blindness - Night Blindness - Total blindness f) Preventive and Rehabilitative aspects g) National programs on Blindness and trachoma h) Current trends in Management of Ophthalmic conditions - Hospital corneal retrieval - Grief counseling - Eye Collection - Counselling - Obtaining consent for eye donation i) Eye banking in India j) Ocular Emergencies - Glaucoma - Foreign body - Acid / Alkali burns - Trauma to the eye k) Eye Immigration l) Instillation of eye drops and ointment m) Cold and hot compress n) Eye dressing and bandage o) Assisting for sac syringing p) Assisting for removal of foreign body q) Alternate therapies r) Drugs used in treatment of eye disorders	10	Lecture cum discussion Visit school for the blind Visit to eye bank Visit National Association for the blind Eye bank Demonstration	Short answer Objective type Essay Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
V	Describe disorders and diseases of ear, nose and throat. Demonstrate skills in Providing nursing care for patients with various ENT problems.	Nursing Management of Patient with Disorders and Diseases of Ear, Nose and Throat Ear a) Review of Anatomy and physiology of Ear b) Assessment of function of ear - History - Ear examination - Diagnostic tests c) Diseases and disorders of the ear <i>External ear</i> - Otitis - Foreign body - Impacted cerumen - Furunculosis <i>Middle ear</i> - Otitis media - Mastoiditis - Perforation of ear drum <i>Internal ear</i> - Presbycusis - Labyrinthitis - Meniere's disease - Otosclerosis <i>Deafness</i> - Conductive deafness - Neural deafness <i>Tumors of the ear and auditory nerve</i> <i>Insufflations of Eustachian tube</i> Nose a) Review of Anatomy and physiology of nose b) Assessment of functions of nose - History - Examination of nose - Diagnostic tests c) Diseases and disorders of nose <i>Infections</i> - Rhinitis - Sinusitis - Obstruction - Polyps <i>Foreign body</i> <i>Deviated nasal septum</i> <i>Trauma – fracture of nasal bone and epistaxis</i> Throat a) Review of Anatomy and physiology of Throat	15	Lecture cum discussion Clinical teaching Demonstration Videos, charts	Short answer Objective type Essay Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		b) Assessment of the function of throat - History - Examination of throat - Diagnostic tests c) Diseases and disorders of throat infections and inflammation - Tonsillitis - Pharyngitis - Adenoiditis - Laryngitis - Tumors - Injury and foreign body - Alternate therapies - Drugs used in treatment of ENT disorders			
VI	Describe cardiovascular, circulatory and Hematological disorders and diseases. Demonstrates skill in carrying nursing interventions for clients with circulatory and hematological disorders and diseases.	Nursing Management of Patient with cardiovascular, circulatory and Hematological disorders Cardio Vascular a) Review of anatomy and physiology of heart and circulatory system b) Assessment of functions of heart and vascular system - History - Physical exam - Diagnostic tests c) Diseases and disorders of cardio vascular system - Coronary Artery disease • Angina pectoris • Coronary atherosclerosis • Myocardial infarction - Valvular heart disease • Mitral stenosis • Aortic stenosis, • Incompetence, regurgitation • Tricuspid stenosis • Pulmonary stenosis - Inflammation and infections • Pericarditis, Myocarditis, Endocarditis • Rheumatic fever - Heart block - Complication of heart disease • Acute Heart failure (Pulmonary Edema) • Chronic (Congestive Cardiac failure) • Cardiogenic shock			

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
		▪ Pericardial effusion, cardiac tamponade - Cardiac emergencies ▪ Cardiac arrest ▪ Shock - Vascular disorders ▪ Arterial disorders ▪ Berger's disease (TAO), ▪ Arterial ulcers, ▪ Arteriosclerosis, ▪ Aneurysm, ▪ Thrombosis and emboli, ▪ Raynaud's disease ▪ Hypertension - Venous disorder ▪ Deep Vein Thrombosis (DVT) ▪ Venous insufficiency ▪ Venous ulcer ▪ Varicose vein ▪ Cellulitis ▪ Lymphatic disorders ▪ Lymphangitis & Lymphadenitis ▪ Lymphedema & elephantiasis Hematological disorders a) Review of function and structure of blood components - Assessment - History - Physical examination - Diagnostic tests b) Diseases and disorders of blood and its components - Anemia - Thalassemia - Polycythemia - Leukopenia and neutropenia - Leukocytosis & leukemia - Lymphomas Hodgkin & Non Hodgkin diseases, Multiple myeloma - Bleeding disorders - Thrombocytopenia, - Purpura, hemophilia - Acquired coagulation - Disorders – Liver disease, Vitamin K deficiency, DIC c) Alternate therapies d) Drugs used in treatment of cardiovascular circulatory and hematology disorders	28	Lecture cum discussion Demonstration Clinical teaching Videos, Simulation	Short answer Objective type Essay type Return demonstration

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
VII	Describe the nursing management of patients with communicable diseases. Demonstrate skill in providing interventions for patients with communicable diseases the nurse's role in various national control/ Eradication Programme of communicable diseases.	Nursing Management of Patients with communicable diseases a) Assessment - History - Physical examination - Diagnostic tests b) Review of infection, mode of transmission, its prevention and control c) Preparation, care and administration of anti sera and vaccines/ isolation, d) Management of various infection diseases caused by Virus; - Measles - Chicken pox - Swine flu - Ebola - Dengue - Chicken guinea - Influenza - Mumps - Encephalitis - Infective hepatitis - Poliomyelitis - Rabies - AIDS Caused by Bacteria; - Diphtheria - Whooping cough - Tetanus - Typhoid - Dysentery - Gastroenteritis - Cholera - Meningococcal Meningitis - Tuberculosis - Plague - Leptospirosis Vector borne diseases; - Malaria - Filariasis - Yellow fever - Dengue - Any other prevailing diseases e) Alternate therapies f) Drugs used in treatment of communicable disorders	10	Lecture cum discussion Role play Participate in immunization campaign	Short answer Objective type Essay type Assessment with clinical checklist

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
VIII	Describe various sexually transmitted diseases. Demonstrates skills in syndromic management of sexually transmitted diseases.	Nursing Management of Patients with Sexually Transmitted diseases a) Assessment - History - Physical examination - Diagnostic tests b) Sex health and hygiene c) Syndromic Management of sexually transmitted disease - Gonorrhea - Syphilis - Granuloma Venerium - Chancroid granuloma - AIDS - Genital herpes	05	Lecture cum discussion Video	Short answer Objective type Essay type
IX	Describe various musculo skeletal disorders and diseases. Demonstrate skills in management of musculo skeletal diseases.	Nursing Management of Patients with musculo skeletal disorders and diseases a) Review of Anatomy and Physiology of musculo skeletal system b) Assessment - History - Physical examination - Diagnostic tests c) Infections and inflammations - Septic arthritis - Gonococcal arthritis - Osteomyelitis - Tuberculosis of the spine and bones - Sprains - Dislocations - Fracture of spine and extremities d) Degenerative conditions of joints, spine e) Tumors, Amputation and prosthesis f) Deformities - Congenital and acquired g) Range of motion exercises h) Care of patient: - Skin and skeletal traction - Orthopedic splints i) POP application and removal j) Neurogenic bladder k) Preparation for bone surgery l) Use of orthopedic assist devices - Crutches - Canes - Walker m) Alternate therapies n) Drugs used in treatment of musculo-skeletal disorders disorders	10	Lecture cum discussion Clinical teaching Demonstration	Short answer Objective type Essay type

Unit No.	Learning Objectives	Content	Hr.	Method of Teaching	Assessment methods
X	Describe the role of nurse in medical surgical emergencies Demonstrate skill in meeting medical surgical emergencies.	Emergency Management a) Scope and practice of emergency nursing - Principles of emergency care - Triage b) Medical Surgical Emergencies c) Airways obstruction - Hemorrhage - Shock, Anaphylactic reaction, Allergies - Trauma – intra abdominal, crush injuries, multiple injuries fractures - Poisoning - Ingested poisoning - Inhaled poisoning - Food poisoning - Injected poisons – Stinging insects - Snake bites Chemical burns - Environmental emergencies: - Heat stroke - Frost bite. - Near drowning - Hanging	10	Lecture cum discussion Demonstration Preparing emergency trolley - Demonstration of CPR - Defibrillation Videos & Films Simulation Roleplay	Short answer Objective type Essay type Return demonstration
XI	Identify the role of nurses in emergency and disasters. Demonstrate beginning skill in managing the Emergencies and disasters.	Emergency and Disaster Nursing a) Natural calamities - Flood - Earthquake - Volcanic eruptions b) Man-made disaster - Explosion - War - Fire - Accidents c) Emergency preparedness d) Community resources available to meet calamities e) Nurses role in disaster management	05	Lecture cum discussion Role play Mock drill INC: Disaster management module: Reaching out: nursing care	Short answer Objective type Essay type

MEDICAL SURGICAL NURSING- PRACTICAL

Placement- SECOND YEAR

Time: 800 hours (20 weeks)

General objectives:

Students are able to apply nursing process and provide comprehensive nursing care to the clients with various medical and surgical conditions

Specific objectives; students are able to;

1. Comprehend the causes, signs and symptoms, treatment and prevention of various medical, surgical conditions.
2. Apply the theoretical knowledge to appropriate clinical nursing practice.
3. Identify the problems and needs, prioritize them and provide comprehensive nursing care by applying nursing process
4. Demonstrate skills in carrying out nursing techniques, procedures in keeping with scientific principles.
5. Demonstrate skills in respective clinical specialty.
6. Interpret and carry out the pharmacological intervention,
7. Identify the deviation from normal in the diagnostic value.
8. Plan and participate in rehabilitation of patient and family.

Area	Duration	Objectives	Skills	Assignment	Assessment methods
General medical wards (resp., GI, Endo., hemato, neuro, renal)	3 wks	• Provide nursing care to adult patients with medical disorders	- Assessment of patient • Take history • Perform general & specific physical examination • Identify alterations and deviations - Practice medical-surgical asepsis-standard safety measures. - Administer medications • Oral • Sub-lingual • Intra-dermal • Subcutaneous • Intramuscular • Intravenous - Intravenous therapy • IV canulation • Maintenance & monitoring - Oxygen therapy-mask, prongs & tent	Plan & implement care for assigned patients • Nursing care plan 1 • Nursing case study-1 or presentation-1	• Assess performance with rating scale • Assess each skill with check list

Area	Duration	Objectives	Skills	Assignment	Assessment methods
		• Counsel and educate patients and family	- Nebulization - Chest physiotherapy - Naso-gastric feeding - Assist in common diagnostic procedures - Perform/assist in therapeutic procedures - Transfusion of Blood & its components - Throat suctioning - ET suctioning - Collect specimens for common investigations - Maintain elimination • Catheterization - Educate & counsel patient & family regarding specific disease conditions.	• Drug study presentation-1 • Maintain drug book • Maintain practical record book	• Evaluation of case study presentation • Completion of practical record
General surgical wards (GI and Urinary)	3 weeks	• Provide pre & post-operative nursing care to adult patients with surgical disorders • Educate & counsel patients and families	- Practice medical-surgical asepsis-standard safety. - Pre-operative preparation of patient - Post-operative care • Receiving • Assessment • Monitoring - Care of wounds and drainage - Suture removal - Ambulation & exercises - Naso-gastric aspiration - Care of chest drainage - Ostomy care • Gastrostomy • Enterostomy • Colostomy - Transfusion of Blood & its components - practice universal precautions	- Plan & implement care for assigned patients • Nursing care plan 1 • Nursing case study-1 or presentation-1 • Drug study presentation-1 • Maintain drug book • Maintain practical record book	• Assess performance with rating scale • Assess each skill with check list • Evaluation of case study presentation • Completion of practical record
Operation theater	3 weeks	• Identify instruments used in different operations	Perform scrubbing, gowning, gloving - Identify instruments, suturing materials for common operations. Disinfection, carbolization sterilization & fumigation	- Assist as a scrub nurse for 5 major and 5 minor cases.	Assess skill with check list

Area	Duration	Objectives	Skills	Assignment	Assessment methods
		- Set-up the table/ trolleys for common operative procedures - Assist in the operative procedures - Provide peri-operative nursing care	- Prepare the OT table depending upon the operation - Positioning and monitoring of patient - Assisting with minor & major operations - Handling specimens - Segregation and disposal of biomedical waste as per guidelines		
ICU	1 week	- Gain proficiency in ICU nursing - Identify potential problem and provide care accordingly - Record findings and medications accurately - Develop good IPR with patient & family.	- Connect and monitor ECG & pulse oxymetry - Assist in endo-tracheal intubation - Suctioning -provide care for a patient on ventilator - Handling emergency drug trolley / crash cart. - Assisting in insertion of central line and monitoring Central venous pressure.	- ET suction-ing - O2 administration	Assess skill with check list
Geriatric nursing – medical / surgical / special ward	1 week	- Identify specific problems related to the elderly - Assist in the activities of daily living - Provide comprehensive nursing care	- Assessment of the geriatric - Identify the health problems among the elderly (psychological, social and spiritual needs of the elderly) and provide specific care - Health promotion of the elderly	Health teaching - 1	Assess skill with check list
Oncology Unit	1 week	Provide care for patients with cancer.	- Screen for common cancers –Tumor Node Metastasis (TNM) classification. - Assist with diagnostic procedures. - Biopsies. - Pap smear	Provide care to assigned patients.	- Assess each Skill with checklist. - Assess performance with rating scale.

Area	Duration	Objectives	Skills	Assignment	Assessment methods
		• Counsel and educate patient and families.	• Bone-marrow aspiration. - Assist with therapeutic procedures. - Observe various modalities of treatment. • Chemotherapy • Radiotherapy • Pain management • Stoma care • Hormonal therapy • Immunotherapy • Gene therapy • Alternative therapy - Participate in palliative care. - Counsel and teach patients families.	• Observation report of cancer unit	• Evaluation of care plan and observation report. • Completion of activity record.
Dermatology and burns	1 week	• Provide care to patients with dermatology disorder and Burn. • Counsel and educate patient and families.	- Assessment of the burn patient. • Percentage of burns. • Degree of burns. • Dressing - Fluid & electrolyte replacement therapy • Assess • Calculate • Replace • Record • Intake/output - Assessment and care of patients with dermatological disorders. - Administer topical medications • Give medicated Baths - Perform active & passive exercises. - Practice medical & surgical asepsis. - Counsel & Teach patients and families	• Provide care to assigned patients. • Health talk - 1	• Assess each skill with checklist. • Assess performance with rating scale.
Ophthalmology	1 week	• Provide care to patients with Eye disorders. • Counsel and educate patient and families.	- Perform examination of eye. - Assist with diagnostic procedures. - Assist with therapeutic procedures. - Perform/assist with irrigations. - Apply eye bandage.	• Provide care to 2-3 assigned patients assessment using snellen's chart	• Assess each skill with checklist - Assess performance with rating scale.

Area	Duration	Objectives	Skills	Assignment	Assessment methods
			- Apply eye drops/ointments. - Teach patients and families.	• Observation reports of OPD & Eye bank. • Assist in organizing eye camp	• Evaluation of observation report of OPD/Eye bank.
ENT	1 week	• Provide care to patients with ENT disorders • Counsel and educate patient and families	- Perform examination of ear, nose and throat. - Assist with therapeutic procedures. - Instillation of drops. - Perform/assist with irrigations. - Apply ear bandage. - Perform tracheostomy care. - Health education to patients and families.	• Provide care to assigned patients.	• Assess each Skill with checklist.
Cardiology ward / ICCU / cardiothoracic and vascular unit	2 weeks	• Provide care of patients with cardiac and vascular disorders • Counsel and educate patients and families	- Perform cardio vascular assessment - Recording ECG and identify basic changes in ECG - Monitoring of patients in on cardiac monitor - Preparing and assisting of frequently performed diagnostic and therapeutic, non –invasive and invasive procedures - Administer cardiac drugs - Advanced / Basic Cardiac Life Support (ACLS/BLS) - Monitoring and caring for patients with chest drainage - Assist in defibrillation - Monitoring of patients in ICU. - Maintain flow sheet. - Perform Endotracheal suction. - Demonstrates use of ventilators, cardiac monitors etc. - Physical examination - Collect specimens and interprets ABG analysis.	• Plan and give care to patients • Health talk – 1 • Case presentation – 1	Assessment of performance with rating scale

Area	Duration	Objectives	Skills	Assignment	Assessment methods
			- Assist with arterial puncture. - Maintain CVP line. - Pulse oximetry. - CPR – ALS - Defibrillators. - Bag- mask ventilation. - Emergency tray/trolley – Crash Cart. - Administration of drugs • Infusion pump. • Epidural. • Intra thecal • Intracardiac - Total parenteral therapy - Chest physiotherapy. - Perform active & passive exercises	• Drug presentation - 1	• Evaluation of health talk, case presentation and drug presentation.
Orthopedic ward	1 week	• Provide nursing care to patients with musculo skeletal disorders • Counsel and educate patient and families	- Assessment of orthopedic patients - Assist in the application of plaster cast and removal of cast - Assist in applying skin traction, bucks extension traction - Assist in application and removal of prosthesis - Physiotherapy - Crutch maneuvering technique - Ambulation	• Plan and give care to assigned patients • Nursing care plan – 1 • Health talk – 1	• Assessment of performance with rating scale • Evaluation of health talk, case presentation and drug presentation
Communicable diseases ward / isolation ward	1 week	• Provide nursing care for patients with communicable diseases	- Assessment of patients with communicable diseases - Use of personal protective equipment (PPE) and barrier nursing - Health teaching for prevention of infectious diseases - Counseling of HIV/ AIDS patients - Counseling of family members	• Give care for assigned patients • Health talk – 1 • Care plan – 1	• Assessment of performance with rating scale • Evaluation of health talk, case presentation and drug presentation

Area	Duration	Objectives	Skills	Assignment	Assessment methods
Emergency ward / casualty	1 week	• Provide care to patients in emergency and disaster situation. • Counsel patient and relatives for grief and bereave-ment	- Practice 'triage'. - Assist with assessment, examination, investigation & their interpretation, in emergency and disaster situations. - Provide first aid - ACLS / BLS - Assist in legal documentations and procedures in emergency unit. - Counsel patient and families grief and bereavement.	• Practice 'triage'.	• Assess Performance with rating scale.

MENTAL HEALTH NURSING

Placement- SECOND YEAR

Time- 70 hours

Course Description:-

This course is designed to help students develop the concept of mental health and mental illness, its causes, symptoms, prevention, treatment modalities and nursing management of mentally ill for individual, family and community.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe the concept of mental health and mental illness and the emerging trends in psychiatric nursing.
2. Explain the causes and factors of mental illness, its prevention and control.
3. Identify the symptoms and dynamic of abnormal human behavior in comparison with normal human behavior.
4. Demonstration a desirable attitude and skills in rendering comprehensive nursing care to the mentally ill.

Total Hours - 70

Unit.	Learning Objectives	Content	Hr.	Teaching Learning Activities	Methods of Assessment
I	Describe the concept of mental health and mental illness in relation to providing comprehensive care to the patients.	Introduction a) Concept of mental health and mental illness b) Misconceptions related to mental illness c) Principles of Mental Health nursing d) Definition of terms used in psychiatry e) Review of defense mechanisms f) Mental Health Team	5	Lecture cum discussion Structured discussion Group interaction	Short answers Objective type
II	Narrate the historical development of Psychiatry and psychiatric nursing.	History of Psychiatry a) History of Psychiatric Nursing - India and at international level b) Trends in Psychiatric Nursing c) National mental health programme	4	Lecture cum discussion	Short answer Objective type
III	Describe mental health assessment	Mental Health Assessment a) Psychiatry history taking b) Mental status examination c) Interview technique	4	Lecture cum discussion Demonstration	Short answer Objective type Return Demonstration

Unit.	Learning Objectives	Content	Hr.	Teaching Learning Activities	Methods of Assessment
IV	Describe therapeutic relationship Demonstrate skills in process recording	Therapeutic nurse-patient relationship: a) Therapeutic nurse patient relationship: Definition, components and phases, Importance b) Communication skills Definition elements, types, factors influencing communication, barriers (therapeutic impasse)	5	Lecture cum discussions Role play Videos Demonstration of process recording	Short answers Return demonstration
V	List various mental disorders and describe their mental and psychiatric and nursing management.	Mental Disorders and Nursing Interventions a) Psycho-Pathophysiology of human behavior b) Etiological theories (genetics, biochemical, psychological etc) c) Classification of mental disorders. d) Disorders of thought, motor activity, perception, mood, speech, memory, concentration, judgment e) Prevalence, etiology, signs and symptoms, prognosis, medical and Nursing management f) Personality & types of personality related to psychiatric disorder g) Organic mental disorders: Delirium, Dementia f) Psychotic disorders: - Schizophrenic disorders - Mood (affective) disorders: Mania depression, Bipolar affective disorders(BPAD) h) Neurotic disorders: Phobia, anxiety disorders, obsessive compulsive disorders, depressive neurosis, conversion disorders, dissociative reaction, psychosomatic disorders, post traumatic stress disorder i) Substance use and de-addiction: alcohol, tobacco and other psychoactive substance j) Child and adolescent psychiatric disorder; - Sleep disorder - Eating disorders - Sexual disorders k) Nursing Management: Nursing process and process recording in caring for patients with various psychiatric disorders	25	Lecture cum discussions Case study Case Presentation Process recording Videos Role plays Field visits- De-addiction centers, Alcohol Anonyms group, Adolescent clinics, Child guidance centers etc	Short answers Essay types Case Study Case Presentation

Unit.	Learning Objectives	Content	Hr.	Teaching Learning Activities	Methods of Assessment
VI	Describe the Bio – psychosocial therapies and explain the role of the nurse	Bio – Psycho & Social Therapies a) Psychopharmacology – Definition, classification of drugs antipsychotic, Antidepressant, antimanic, antianxiety agents, anti parkinsons b) Psychosocial therapies – individual therapies, group therapy, behavior therapy, occupational therapy, family therapy, milieu therapy c) Role of nurse in these therapies. d) Somatic therapy – Electro Convulsive Therapy, insulin therapy, e) Role of nurse in these therapies.	12	Lecture cum discussions Seminar Videos Demonstration Field visits- Rehabilitation centre, Day care centres Role plays	Short Answers Essay types Return demonstration Quiz Drug study
VII	Describe the concept of preventive community mental health services. Enumerate the nurse's role in National mental health programme	Community Mental Health a) Concept, importance, scope b) Attitudes, Stigma and discrimination related to the mentally ill c) Prevention of mental illness (Preventive Psychiatry) during childhood, adolescent, adulthood and old age. d) Community Mental Health Services. e) Role of Nurse in national mental health programme and Psychiatric care in Community	5	Lecture cum discussion Role play Videos	Short answers Essay type Assignment
VIII	Explain different psychiatric emergencies and their management. Demonstrate skills in crisis intervention	Psychiatric Emergencies and Crisis Intervention a) Types of Psychiatric emergencies: Over Active, under active patient, Violent behaviour, b) Suicide, adverse drug reactions, withdrawal symptoms, Acute psychosis etc c) Crisis and its intervention: AIDS, Adolescent Crisis	5	Lecture cum discussion Videos Role plays Demonstration	Short answers Objective Type Essay type
IX	Describe the legal aspects to be kept in mind in the care of mentally ill patients.	Forensic Psychiatry / Legal Aspects a) India Lunatic Act 1912 b) Narcotic Drugs and psychotropic Act 1965, 1985 c) Mental Health Act 1987, 2014 d) Admission and discharge procedures e) Standards of psychiatric nursing practice. f) Rights of Mentally ill patients g) Legal responsibilities in the care of mentally ill patients.	5	Lecture cum discussions Demonstration	Short answers Essay type Objective Quiz

MENTAL HEALTH NURSING- PRACTICAL

Placement- SECOND YEAR

Time – 320 hrs (8 weeks)
Internship 96 hrs (2 weeks)

Areas	Duration	Objectives	Skill	Assignments	Assessment methods
Psychiatric OPD	3 weeks	- Assess patients with mental health problems - Observe and assist in therapies - Counsel and educate patients, and families	- History taking - Perform mental status examination - Assist in psychometric assessment - Observe and assist in therapies - Teach patients and family members	- History taking-1 - Mental status examination-2 - Observation report of OPD-1	- Assess performance with rating scale - Assess each skill with checklist - Assessment of observation report - Completion of activity record
Child guidance clinic	1 week	- Assessment of children with various mental health problems - Counsel and provide health education for children, families and significant others	- History taking - Perform mental status examination - Observe and assist in therapies - Health education of family members and significant others - Counsel family members and significant others	Observation report of child guidance clinic	- Assess performance with rating scale - Assess each skill with checklist - Assessment of observation report
Inpatient ward	6 weeks	- Assess patients with mental health problems - Provide nursing care for patients with various mental health problems	- History taking - Perform mental status examination - Observe and assist in therapies - Provide nursing care to the mentally ill patient - Health educate family members and significant others	- Assess & give nursing care to 2-3 patients with various mental disorders - History taking-1 - Mental status examination-2 - Case study-1 - Care plan -1 - Case presentation-1 - Process recording-2 - Maintain drug book	- Assess performance with rating scale - Assess each skill with checklist - Assessment of the case study, case presentation, process recording and care plan

CHILD HEALTH NURSING

Placement- SECOND YEAR

Time – 70 hour

Course Description:-

This course is designed to help students develop and understanding of the concept of child health, the trends in child care and the health problems of children. This shall enable the students to meet the needs of the children, in health and sickness.

General Objective:-

Upon completion of this course, the students shall able to:

1. Explain the concept of child health, the principles underlying child care trends in pediatric nursing.
2. Describe normal growth and development of children, so as to recognize deviations for normal health and care of healthy children
3. Demonstration skill in meeting the needs of the sick infants and children based on the IMNCI guidelines of GoI

Total Hours: 70

Unit No.	Learning objective	Content	Hours	Teaching learning activities	Assessment methods
I	Understand the concept of the child health care, trends & emerging challenges for pediatric nurses Describe the role of pediatric nurses in clinics, hospitals and community	Introduction a) Modern concept in child health care b) Trends in pediatric nursing c) Role of pediatric nurses in child care d) Emerging challenges, nursing process related to pediatric nursing e) Concept of preventive pediatric f) Vital statistics related to pediatrics as per the NRHS and GoI	5	Lecture cum discussions Project on collection of vital statistics related to child health	Short answers Objective type Essay type
II	Describe the normal growth & development of children	Growth & Development a) Definition, principles, factors affecting growth & development, techniques of assessment, plotting of growth chart	15	Lecture cum discussions Role play Videos Plotting of growth chart	Short answers Objective type Essay type

Unit No.	Learning objective	Content	Hours	Teaching learning activities	Assessment methods
		b) Infant: Growth & Development, health promotion, breast feeding & weaning, immunization, infant and young child feeding c) Toddler : Growth & Development, nutrition counselling, toilet training, safety, prevention of accidents, play. d) Preschoolers Growth & development Daycare centers Role of Parents in sex education e) School ager Growth & development, rest, sleep, physical exercises & activity, dental health, sex education f) Adolescent - Growth & development, adaptation to puberty, menstrual hygiene, nutritional guidance, sex education, - Role of Parents in health promotion of adolescents - Control of iron deficiency anemia (WIFS guidelines)			
III	Describe the role of nurse in caring for a sick child Develop skill in carrying out nursing intervention while caring for pediatric age group.	The sick child a) Child's reaction to hospital b) Effect of hospitalization on the family of the child c) Role of nurse in helping child & family in coping, with stress of hospitalization & illness Pediatric procedures: a) Preparation of child for diagnostic tests, collection of specimens. b) Calculation & Administration of oral & parenteral medication c) Procedures related to feeding - Katori & Spoon - Ryle's tube & gastrostomy	8	Lecture cum discussions Demonstration Simulation Role play	Short answers Objective type Essay type Return demonstration

Unit No.	Learning objective	Content	Hours	Teaching learning activities	Assessment methods
		d) Procedures relating to elimination - Enema - Colostomy irrigation e) Administration & analysis of oxygen concentration, steam inhalation, nebulization, f) Other procedures: - Pediatric Resuscitation - Surgical dressing			
IV	Describe the management of behavioral disorders and common health problems of children Demonstrate skills in the prevention & implementation of medical & nursing management of behavioral disorders & common health problems.	Disorders and health problems of a child a) Infancy : - Failure to thrive - Diarrhea & Vomiting b) Childhood - Communicable diseases - Tonsillitis - Otitis media - Child abuse - Breath holding spasms - Enuresis, nail biting, thumb sucking, somnambulism - Protein Energy Malnutrition - Helminthic infections - Bites and stings - Pica - Tics c) Adolescent - Precocious puberty - Gynecomastia - Accident, sport injuries - Obesity & anorexia nervosa - Juvenile delinquency	6	Lecture cum discussions Seminars	Short answers Objective type Essay type
V	Demonstrate skills in providing comprehensive nursing care to the children having congenital defects/ malformation.	Child with congenital disorders: Etiology, signs and symptoms, diagnosis, complications and medical, surgical & nursing management of children with: - Malformations of CNS, cranial deformities, spina bifida, hydrocephalus, cerebral palsy, meningocoele. - Skeletal defects, cleft lip & cleft palate	15	Lecture cum discussions Presentation of picture of congenital anomalies Supervised clinical practices	Short answers Objective type Essay type

Unit No.	Learning objective	Content	Hours	Teaching learning activities	Assessment methods
		- Gastro intestinal tract defects, fistula, anorectal malformations, hernia - Congenital hypertrophied pyloric stenosis - Defects of Genito-urinary Tract –hypospadias & epispadias, extrophy of bladder, phimosis & paraphimosis, cryptorchidism, polycystic kidney - Sexual abnormalities, ambiguous genitalia - Defects of cardio vascular system, cyanotic and acyanotic- TOF (Tetralogy of Fallouts), TGV (Transposition of Great Vessels), TAPVC, ASD, VSD, Coactation of aorta, PDA - Orthopedic abnormalities - congenital talipusequinovarus, congenital dislocation of hips - Chromosomal abnormalities - Down's syndrome, Turner's syndrome.			
VI	Demonstrate skills in providing comprehensive nursing care to children with various disorders & diseases	Children with various disorders and diseases Etiology, signs and symptoms, complications, prevention, medical, surgical & nursing management of : a) Renal System - Nephrotic Syndrome - Acute Glomerulonephritis - ARF & CRF b) Resp. System - URI and LRI - Asthma, Pneumonia c) GI System - Intestinal obstruction (Mechanical) - Hirschsprung's disease - Malabsorption Syndrome - Inflammatory conditions – appendicitis, Meckel's diverticulum, ulcerative colitis - Worm infestation	15	Lecture cum discussions Presentation Clinical teaching, Simulation, Videos, Visit to Blind, Deaf & dumb school & rehabilitation centre	Short answers Objective type Essay type

Unit No.	Learning objective	Content	Hours	Teaching learning activities	Assessment methods
		d) CVS System - Rheumatic fever - CCF - Infective endocarditis e) Hematological System - Anemia - Leukemia, - Thalassemia - Hemophilia - Sickle cell anemia - Thrombocytopenic purpura f) Neurological System - Meningitis - Encephalitis - Convulsive disorders - Cranio-cerebral trauma g) Endocrine - Pituitary disorders - Hypo & Hyperthyroidism - Juvenile Diabetes - Adrenal disorders h) Developmental problem - Handicapped children - Mental Retardation - Dyslexia - Hearing & Vision impairment i) Others: - Fluid and electrolyte imbalance - Burns j) Problems with locomotion: - Poliomyelitis - Osteomyelitis - Kyphosis, lordosis, scoliosis - Fractures k) Pre and post operative care of children undergoing surgery.			

Unit No.	Learning objective	Content	Hours	Teaching learning activities	Assessment methods
VII	Describe the various child welfare services provided by Governmental & non Governmental agencies Explain the ethical & legal implication in pediatric nursing	Child welfare services a) Child welfare services and agencies: - ICDS - Mid-day meal program - Balwadi, anganwadi - Day care centers - NPSP b) Law pertaining to Pediatrics: - National child labour policy - Child act. - Juvenile justice act - Internationally accepted rights of the child - Rehabilitation of delinquent & destitute children - Adoption laws and services - Adolescent health programs – menstrual hygiene, WIFS program, adolescent safety program	6	Lecture cum discussions Visit to anganwadi schools, remand homes & adoption centers	Short answers Objective type Essay type

CHILD HEALTH NURSING- PRACTICAL

Placement- THIRD YEAR

Time – 320 hrs (8 weeks)

Internship 96 hrs (2 weeks)

Areas	Duration	Objectives	Skill	*Assignments	Assessment methods
Paediatric medicine ward	3 weeks	• Perform physical assessment • Assist in diagnostic procedure and provide pre and post care related to diagnostic procedure • Administer the drugs • Provide health education • Perform basic resuscitation	- Taking pediatric History - Perform physical examination and assessment of children - Administration of oral, I/M, & I/V, medicine/ fluid - Calculation of fluid requirements - Prepare different strengths of I.V. fluids - Apply restraints - Administer O2 inhalation by different methods - Feed children by katori (bowl) and spoon, pallada etc. - Collect specimens for common investigations - Assist with common diagnostic procedure - Teach mothers/ parents on balance diet for child of different age group - Oral rehydration therapy - Feeding & weaning - Play therapy - Check vital signs - Give enema - Insert suppositories	Give care to assigned paediatric patients Nursing care plan-1 Case study or Presentation-1 Health talk-1	• Assess performance with rating scale • Assess each skill with checklist • Evaluation of Nursing care plan, Case study, Health talk, Case presentation • Completion of activity record

Areas	Duration	Objectives	Skill	*Assignments	Assessment methods
Paediatric surgery ward	3 weeks	• Recognize different pediatric surgical condition • Provide pre and post operative care to children with common paediatric surgical conditions/ malformation • Counsel and educate parents	- Do bowel wash - Care for ostomies: • Colostomy irrigation • Ureterostomy • Gastrostomy • Enterostomy - Urinary catheterization and drainage - Feeding • Nasogastric • Gastrostomy • Jejunostomy - Care of surgical wound dressing - Suture removal	• Give care to three assigned paediatric surgical patients • Nursing care plan-1 • Case study or presentation-1	• Assess performance with rating scale • Assess each skill with checklist • Evaluation of Nursing care plan, Case study, Case presentation • Completion of activity record
Paediatric OPD/ Immunization room/ well baby clinic / adolescent clinic	4 weeks	• Perform assessment of children, health development and anthropometric • Perform immunization • Give health education/ nutritional education	- Assessment of children - Health assessment - Developmental assessment - Anthropometric assessment - Immunization - Health/ nutritional education	• Health assessment of the child • Health talk - 1 • IMNCI Module	• Assess performance with rating scale • Completion of activity record • Assessment of the health talk.

MIDWIFERY AND GYNECOLOGICAL NURSING

Placement- THIRD YEAR

Time- 140 hours

Midwifery- 120 hours

Gynecological Nursing- 20 hours

MIDWIFERY

Course Description:-

This course is designed to help students acquire knowledge and gain skills to meet the needs of women during pregnancy, labor and puerperium and care for the newborn.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe the health needs of women in pregnancy, labour and puerperium.
2. Identify deviation(s) from normal pregnancy, labour and puerperium and take appropriate action.
3. Demonstrate skills in providing antepartum, intrapartum and postpartum care to the mother as well as care to the new born as per the SBA guidelines of Government of India.

Total Hours:120

Unit No.	Learning objectives	Contents	Hr	Teching learning Activities	Assessment methods
I	Describe the scope and trends in midwifery	Introduction: a) Definition of midwifery and obstetrical nursing b) Scope of midwifery c) Basic competencies of a midwife d) History of midwifery e) Trends of maternity services in India f) Vital statistics related to maternal health in India.	4	Lecture cum discussions Videos	Short answers Objective type Essay type
II	Describe the anatomy and physiology of female reproductive system	Reproductive system a) Review of structure and function of female reproductive system b) Female pelvis –structure, types and diameters	5	Lecture cum discussions Demonstrations Charts, Specimen Models & Objects	Short answers Objective type Essay type Viva

Unit No.	Learning objectives	Contents	Hr	Teaching learning Activities	Assessment methods
III	Describe the stages of Embryological and fetal development	Embryology and foetal development a) Oogenesis, spermatogenesis, fertilization and implantation. b) Embryology and Fetal development c) Placenta and membranes: - Structure - Functions - Abnormalities - Liquor amni - Umbilical cord d) Fetal skull: - Structure - Diameters - Fontanels and sutures e) Fetal circulation	8	Lecture cum discussions Charts Models & Objects Specimens	Short answers Objective type Essay type Oral presentation
IV	Describe the physiological changes in pregnancy and the management of normal pregnancy Demonstrate skill in caring for pregnant women	Normal pregnancy and its management a) Pre-conception care b) Genetic counseling c) Physiological changes in pregnancy d) Diagnosis of pregnancy - History - Signs & symptoms e) Antenatal care: - History taking - Calculation of expected date of delivery. - Examination and investigations - Health Education and counselling - Drugs and immunizations f) Minor disorders and their management	12	Lecture cum discussions Demonstration Clinical teaching Simulation Charts & Videos SBA module of government of India, handbook for staff nurses (Government of India)	Short answers Objective type Essay type Assessment of skill using checklist
V	Describe the various stages of labour and the role of the midwife in caring for a woman in labour Demonstrate skill in conducting the normal delivery	Normal labour and its management a) Definition and stages b) Causes and signs of onset of labour c) True and false labour d) First stage of labour: - Physiology - Monitoring using partograph and its interpretation - Care of mother : physical and psychological - Pain management - Setting up of the labour room including newborn corner	18	Lecture cum discussions Demonstrations Case studies Simulation Videos Exercises SBA module of government of India, handbook for staff nurses (Government of India)	Short answers Objective type Essay type Assessment of skill using checklist

Unit No.	Learning objectives	Contents	Hr	Teching learning Activities	Assessment methods
		e) Second stage: - Physiology and mechanism - Monitoring - Conduction of normal delivery - Episiotomy - Essential newborn care f) Third stage: - Physiology and signs - Active management of third stage - Examination of the placenta - Episiotomy suturing g) Fourth stage: - Physiology - Care of the mother and baby - Postpartum family planing			
VI	Describe the management of normal newborn Development of skill in caring for the normal newborn	Management of newborn a) Assessment b) Physiological adaptation c) Apgar scoring d) Examination for defects e) Breast feeding- BFHI f) Care of newborn -Skin, eyes, buttocksetc g) Bonding and rooming in h) Minor disorders of new born: - Birth marks, rashes, skin - Infections, sore buttocks, - Infection of eyes.	14	Lecture cum discussion Demonstrations, Clinical teaching Chart Videos SBA module, ENBC, NSSK, PPIUCD module, handbook for staff nurses of government of India	Short answers Objective type Essay type Assessment of skill using checklist
VII	Describe normal pureperium and the role of midwife in the caring for woman in puerperium	Management of normal puerperium a) Definition and objectives of care b) Physiological changes c) Postnatal counselling d) Lactation and feeding e) Care during puerperium – breast and perineal care, postnatal exercise, postnatal examination, follow up, family welfare f) Minor ailments and management. g) Family planning	10	Lecture cum discussion Demonstration Simulation Role play SBA module, PPIUCD module, handbook for staff nurses of government of India	Short answers Objective type Essay type Assessment of skill using checklist

Unit No.	Learning objectives	Contents	Hr	Teching learning Activities	Assessment methods
VIII	Describe the complications of pregnancy Demonstrate skills in providing care for women with complicated pregnancy	Management of complications during pregnancy a) Bleeding in pregnancy - Early and late - Ectopic pregnancy - Abortion - Antepartum hemorrhage - Vesicular mole b) Hyperemesis gravidarum c) Gestational diabetes mellitus d) Pregnancy induced hypertension - Pre eclampsia - Eclampsia e) Hydromnios – poly and oligo f) Pelvic inflammatory diseases g) Intra uterine growth retardation h) Post maturity i) Intra uterine death High risk pregnancy: - Monitoring- NST, USG - Anemia - Jaundice - Viral - Urinary tract infections - Hearts diseases - Diabetes - AIDS and STD's - Osteomalacia, - Teenage pregnancy - Elderly Primigravida - Multipara - Multiple pregnancy	12	Lecture cum discussions Case presentation Clinical teaching Videos Simulation Case studies and exercises SBA module	Short answers Essay type Objective type Assessment of skill using checklist
IX	Describe the management high risk labour Demonstrate skills in early detection and prompt management of high risk labour	Management of high risk labour a) Malposition, malpresentations b) Contracted pelvis c) Abnormal uterine actions d) Cervical Dystocia e) Premature rupture of membranes, precipitate and prolonged labour, induction of labour obstructed labour, f) Obstetrics Emergencies-Cord prolapse, cord presentation, amniotic fluid embolism, obstetric shock, rupture of uterus, shoulder dystocia, vasa previa.	10	Lecture cum discussion Demonstration Bed-side clinic Videos & Charts Clinical teaching IMPAC module of WHO MCPC module of Government of India	Short answers Objective type Essay type Assessment of skill using checklist

Unit No.	Learning objectives	Contents	Hr	Teching learning Activities	Assessment methods
		g) Complications of third stage - Postpartum Hemorrhage - Atonic uterus - Injuries to the birth canal - Retained placenta and membranes - Inversion of uterus			
X	Describe the puerperal complications Demonstrate skill in the management of complications of puerperium	Management of complications of puerperium - Puerperal pyrexia - Puerperal Sepsis - Thrombophlebitis and Embolism - Breast engorgement, Mastitis, Breast abscess - Puerperal psychosis	4	Lecturer cum discussion Demonstration Clinical teaching MCPC module of Government of India	Short answers Objective type Essay type
XI	Describe the management of high risk and sick newborn Demonstrate skills in caring for high risk and sick newborns	High risk and sick newborn - Assessment - Nursing care - Management of newborn with: - Hyperbilirubinaemia - Neonatal hypoglycemia - Hypothermia - Neonatal Convulsions - Rh incompatibility - Small for dates - Low birth weight - Preterm - Asphyxia, RDS - Sepsis - Birth injuries Cephal hematoma Caput succedaneum Facial & Erb's palsy Torticollis Hemorrhage - Congenital anomalies - Newborn of HIV positive mother, diabetic mother - Levels of care in NICU	10	Lecturer cum discussion Demonstration Clinical teaching IMNCI module SBA module NSSK module	Short answers Objective type Essay type Assessment of skill using checklist

Unit No.	Learning objectives	Contents	Hr	Teching learning Activities	Assessment methods
XII	Describe the obstetric operations and midwife role in assisting with each one	Obstetric operations a) Definition, indication and care of women undergoing - Induction of labour - Manual removal of placenta - Version - Forceps delivery - Vacuum extraction - Caesarean Section - Sterilization - Destructive surgeries - Amnio infusion - Manual Vacuum Aspiration, Dilatation and Evacuation, Dilatation and Curettage b) Post abortion care.	10	Lecture cum discussion Clinical teaching Videos Post abortion care module of GoI	Short answers Objective type Essay type Assessment of skill using checklist
XIII	Describe the midwife's role in the administration of drugs for women during pregnancy, labour and post partum period	Drugs used in obstetrics a) Indication, dose, action, contraindication, side effects and responsibilities in the administration of: - Oxytocin - Uterotonics - Tocolytics - Antihypertensives - Anticonvulsants - Anesthesia and analgesia b) Drugs used for newborn c) Teratogens – effects of drugs on mother and baby.	4	Lecture cum discussion Drug presentation	Short answers Objective type Essay type
XIV	Describe the ethical & legal issues related to midwifery	Ethical and legal aspects related to midwifery a) Maternal and newborn death review b) Mother and child tracking system	2	Lecture cum discussion Presentation	Short answers Objective type

GYNECOLOGICAL NURSING

Course objective

The students shall be able to identify different gynecological disorders and diseases and gain skills in providing nursing care to women suffering from them.

General Objective:-

Upon completion of this course, the students shall able to:

1. List different gynecological problems and demonstrate skills in providing nursing care to women suffering from these disorders and diseases.

Total Hours:20

Unit No	Learning objectives	Content	Hours	Teaching learning activities	Method of assessment
I	Define the terms used in gynecology Demonstrate the skills of gynecology history taking, conducting examination & investigation	Introduction a) Definition of terms b) History c) Examination d) Investigation	2	Lecture cum discussion Demonstration Videos	Short answers Objective type Essay type Return demonstration
II	Describe the physiology, psychology and pathology of puberty	Puberty a) Definition b) Development of sex organs in females and sexuality c) Review of menstrual cycle d) Premenstrual syndrome e) Disorders of menstruation, dysmenorrhoea, cryptomenorrhoea, dysfunctional uterine bleeding	3	Lecture cum discussion Clinical teaching Videos Charts	Short answers Objective type Essay type
III	Describe the management of couples with fertility related problems.	Fertility and infertility a) Definition b) Causes-both in male and female c) Investigation d) Management e) Artificial reproductive techniques	2	Lecture cum discussion Clinical teaching, Videos Role play	Short answers Objective type Essay type

Unit No	Learning objectives	Content	Hours	Teaching learning activities	Method of assessment
IV	Demonstrate skills in the management of clients with various pelvic infections.	Pelvic infections a) Vulva – vulvitis, bartholinitis b) Vagina - Vaginitis, Trichomonas vaginitis, Moniliasis, c) Metritis, Salpingitis, Oophritis d) Cervical erosions e) Pelvic Abscess f) Chronic infection g) Pelvic inflammatory disease h) Pelvic tuberculosis i) Sexually Transmitted Diseases - Syphilis - Gonorrhea - Warts - HIV j) Syndromic case management	4	Lecture cum discussion Clinical teaching Videos Prevention of STI module of NACO	Short answers Objective type Essay type
V	Describe the care of women with gynaecological disorders	Gynaecological disorders a) Retroversion, retro flexion b) Fistulas c) Uterine displacement & prolapse (Procidentia) d) Uterine malformations e) Cysts and fibroids f) Uterine polyps g) Tumors of the reproductive tract – benign and malignant h) Palliative care and rehabilitation	5	Lecture cum discussion Case Presentation Demonstration	Short answers Objective type Essay type
VI	Describe the care of the woman with breast disorders	Breast disorders a) Review mastitis, breast engorgement, breast abscess b) Tumors of the breast benign and malignant	2	Lecture cum discussion Clinical teaching, Videos Role play	Short answers Objective type Essay type
VII	Describe the care of women with menopause	Menopause a) Definition and physiological changes b) Signs and symptoms c) Health education and counselling d) Hormone replacement therapy e) Surgical menopause	2	Lecture cum discussion Case histories.	Short answers Objective type Essay type

MIDWIFERY & GYNAECOLOGICAL NURSING- PRACTICAL

Placement: THIRD YEAR (PART – I)

Time: 560 hours
Internship: 384 hours

Area	Duration	Objectives	Skills	Assignment	Assessment methods
Antenatal clinic / ward	3 weeks	• Assessment of pregnant women • Counselling of Antenatal mothers	- Diagnose pregnancy using pregnancy detection kit (preg-card) - Antenatal history taking - Physical examination - Antenatal examination – abdomen and breast - Recording weight and BP - Hemoglobin estimation - Urine testing for sugar and albumin - Immunization - Assessment of risk status - Antenatal counselling - Maintenance of antenatal records - SBA module	• Conduct antenatal examinations – 20 • Health talk – 1 • Case study – 1	Verification of the findings of antenatal examinations Assessment of skills using checklist
Labour room	6 weeks	• Assess the woman in labour • Carry out pervaginal (PV) examinations • Monitor women in labour • Conduct normal deliveries • Perform episiotomy and suture it • Resuscitate newborns	- Assessment of woman in labour - Vaginal examinations (PV) and their interpretation - Monitoring women in labour using the partograph - Caring for women in labour - Setting up of the labour unit including the newborn corner - Conduct normal delivery including active management of third stage of labour (AMTSL) - Provide essential newborn care - Immediate newborn assessment - Resuscitation of the newborn. - Assessment of the risk status of the newborn - Episiotomy and suturing	• Perform pervaginal examinations – 5 • Conduct normal deliveries – 20 • Perform and suture episiotomies – 5 • Resuscitate newborns – 5 • Witnessing abnormal deliveries - 5 • Case book recording	Assessment of clinical performance with rating scale Assessment of each skill with checklist. Practical examination

Area	Duration	Objectives	Skills	Assignment	Assessment methods
			- Administration of uterotonic drugs – oxytocin, misoprostol - Administration of magnesium sulphate. - Maintenance of labour and birth records - SBA module		
Operation theatre	2 week	• Prepare and assist with caesarean section, MTP, tubectomy and other surgical procedures	- Preparation for caesarean section and other surgical procedures - Assist in caesarean section - Prepare and assist in MTP procedures - Prepare and assist for tubectomy	• Assist with caesarean section – 2 • Case book recording	Assessment of skill with checklist.
Postnatal ward	5 weeks	• Provide nursing care to postnatal mother and the baby • Counsel and teach mother and family for parenthood	- Examination and assessment of mother and the baby - Identification of deviations - Care of postnatal mothers and baby - Perineal care - Breast care - Lactation management - Breast feeding - Kangaroo mother care (KMC) - Immunization - Teaching postnatal mother on mother craft, post natal care, exercise, immunization	• Provide postnatal care to mothers and babies – 20 • Health talks – 1 • Case study – 1 • Case presentation - 1	Assessment of clinical performance with rating scale Assessment of each skill with checklist. Practical examination
NICU	4 weeks	• Provide nursing care to newborns at risk	- Newborn assessment - Admission of neonates - Feeding of high-risk newborn :- katori spoon, paladai, tube feeding, total parenteral nutrition - Thermal management of newborns – kangaroo mother care, care of baby in radiant warmer and incubator. - Monitoring and care of neonates	• Case study - 1 • NSSK Module	Assessment of clinical performance with rating scale Assessment of each skill with checklist. Practical examination

Area	Duration	Objectives	Skills	Assignment	Assessment methods
			- Administration of medications - Intravenous therapy - Assisting in diagnostic procedures - Assist in exchange transfusion - Care of baby in ventilator, phototherapy, - Practice infection control protocols - Health education and counselling of parents - Maintenance of records and reports		
Family welfare clinic	2 week	• Counsel for and provide family welfare services.	- Family planning counselling techniques - Insertion of IUCD - Teaching by demonstration on the use of different family planning methods - Arrange for and assist with family planning operations - Maintenance of records and reports	• IUCD insertion – 5 • Family planning counselling – 2	- Assessment of clinical performance with rating scale - Assessment of each skill with checklist. - Practical examination
Gynaecology ward	2 weeks	• Provide care for patients with gynecological disorders. • Counsel and educate patient and families.	- Assist with gynecological examination. - Assist and perform diagnostic and therapeutic procedures. - Teach women on breast self examination (BSE) - Health education on perineal hygiene and prevention of sexually transmitted infections - Pre and post operative care of women undergoing gynecological surgeries - Menopause counseling	• Provide care to assigned patients. • Nursing care plan- 1. • Menopause counseling – 1	• Assess each skill with checklist. • Assess performance with rating scale. • Evaluation of care plan.

COMMUNITY HEALTH NURSING-II

Placement: THIRD YEAR (PART – I)

Total Hours: 90

Course Description:-

This course is designed to help students to practice community health nursing for the individual, family and groups at both the urban and rural settings by using concepts and principles of health and community health nursing.

General Objective:-

Upon completion of this course, the student shall be able to:

1. Describe the health system and health care services in India.
2. Identify major health problems, national health programmes and specialized community health services.
3. Explain the concept of health team and describe the nurses' role at various levels of health care setting.
4. Demonstrate skills in rendering effective nursing care to the individual, family and groups in all community health settings.

Total Hours: 90

Unit	Learning objective	Contents	Hr	Teaching learning Activities	Assessment methods
I	Explain the health system in India	Health system in India Organization and administration of health system in India at a) Central level - Union Ministry - Directorate General of Health Services - Central Council of Health b) State level - State Health Administration - State Ministry of Health - State Health Directorate c) District level - Sub Divisions - Tehsils/ Talukas - Villages - Municipalities & Corporation - Panchayats	10	Lecture cum discussion Organizational chart of various levels Visit to Municipality Office, Panchayat office, Health block office, CHC	Short answer Objective type Essay type

Unit	Learning objective	Contents	Hr	Teaching learning Activities	Assessment methods
II	Describe the health care services in India and discuss the role of the nurse in these services	Health care delivery system a) Health care concept and trends b) Health care services - Public sector, Rural, Urban c) Private sector d) Public Private Partnership (PPP) e) Other agencies f) Indigenous systems of medicine Ayurvedha, yoga, unani, siddha and homeopathy (AYUSH) g) Voluntary health services h) National Health Programmes i) Nurse role in health care services	8	Lecture cum discussion Visit to different health care agencies	Short answer Objective type Essay type
III	Describe health planning in India	Health planning in India a) National health planning b) Five year plans c) Health Committees and reports d) National health policy	10	Lecture cum discussion and reports	Short answer Essay type
IV	Describe the different specialized community health services and the nurse's role in these services	Specialized community health services and nurse's role a) RCH (reproductive health and child care) b) National Health Mission (rural/ urban) c) Janani Sishu Suraksha Karaykaram (JSSK) d) Emergency ambulance services. e) Government health insurance schemes f) School health Services g) Occupational health nursing (including health care providers) h) Geriatric nursing i) Care of differently abled- Physical and mental j) Rehabilitation nursing	18	Lecture cum discussion Visit to different agencies of specialized services, factory, Old age home, Homes for the differently abled	Short answer Objective type Essay type
V	Describe the major health problems in India	National health problems Health Problems in India a) Communicable diseases b) Non communicable diseases c) Nutritional problems d) Environmental sanitation e) Population	5	Lecture cum discussion Quiz	Short answer Objective type
VI	Describe the national health and family welfare programs in India and the role of the nurse	National Health programme: - National ARI program - Revised national tuberculosis control program (RNTCP) - National anti-malaria program - National filarial control program	15	Lecture cum discussion Government of India program flyers.	Short answer Objective type

Unit	Learning objective	Contents	Hr	Teaching learning Activities	Assessment methods
		- National guinea worm eradication program - National leprosy eradication program - National AIDS control program - STD control program - National program for control of blindness - Iodine deficiency control program - Expanded program of immunization - National family welfare program - National water supply and sanitation program - Minimum needs program - National diabetes control program - Polio eradication : pulse program program, NPSP - National cancer control program - Yaws eradication program - National nutritional anemia prophylaxis program - 20 point program - ICDS program - Mid –day meal program - National mental health program - Adolescent health program - Role of nurse in the national health programme.			
VII	Explain the meaning of demography and describe the national family welfare programmes	Demography and family welfare a) Demography - Concept - Trends in the world and in India - Concept of fertility and infertility - Small family norm b) Family Welfare - Concept, importance, aims & objectives - Family planning methods - Family planning counseling - National family Welfare Policy - National family Welfare Programme - Role of a nurse in the family planning programme	18	Lecture cum discussion Show and explain family planning devices Role play Demonstration	Short answer Objective type Essay type

Unit	Learning objective	Contents	Hr	Teaching learning Activities	Assessment methods
VIII	Describe the concept and functions of health team and the role of nursing personnel at various levels.	Health Team: a) Concept - Composition - Functions b) Role of Nursing personnel at various levels: - District Public Health Nursing Officer - Block health Nurse - Public Health Nurse - Lady Health Visitor/ health supervisor - Health worker female/ ANM	7	Lecture cum discussion Interaction with health team members: Job description as per the Indian Public Health Standards (IPHS)	Short answer Objective type Essay type
IX	Explain the concept and uses of health information system	Health Information System a) Concepts, components, uses , sources. b) Vital Statistics: - Important rates and indicators c) Vital health records and their uses. d) Basic statistical methods e) Descriptive statistics	6	Lecturer cum discussion Exercises	Short answer Objective type Exercises
X	Describe the national and international health agencies	Health Agencies a) International: - WHO - UNFPA - UNDP - World bank - FAO - UNICEF - DANIDA - European commission (EU) - Red cross - USAID - UNESCO - ILO - CARE b) National: - Indian Red Cross - Indian Council for child welfare - Family Planning association of India - Other NGOs	3	Lecture cum discussion Seminar	Short answer Objective type

COMMUNITY HEALTH NURSING II- PRACTICAL

Placement: THIRD YEAR- PART I

Time: Practical – 160 hours

Area	Duration	Objectives	Skills	Assignments	Assessment Methods
Community Health Nursing II-	4 wks urban / rural	- Organize and conduct clinics - Antenatal - Postnatal - Family welfare. - Under five. - Diagnose health needs and provide domiciliary care for antenatal and postnatal mothers. - Assess health needs of family; plan and carry out treatment for minor ailments; identify need for referral and refer. - Plan, conduct and follow up health education. - Assist in conducting camps and participate. - Maintain records and reports in PHC. - Assist in family welfare services and conduct need based health education. - Participate in school health programme. - Counsel and educate eligible couple, family and community.	- Assisting in set-up and conduct of the clinics. - Providing domiciliary care to the antenatal and postnatal cases using bag and / or Domiciliary Obstetric Kit. - Performing nursing care at home. - Preparing and conducting Health Teachings on Reproductive and Child Health (RCH) Care Issues. - Assisting in organizing Camps. - Maintaining records and reports at Primary Health Centre. - Assisting in activities of Family Welfare. - Participating in School Health Services.	- Health talk- 2 - Family Health Nursing care plan-2 - Group project-1 - Daily Dairy-1 - Report on school health program	- Internal examination (1st& 2nd term) - Pre Council examination - Assessment of performance with rating scale - Evaluation of Assignments - Field visit reports - Daily diary

Placement- INTERNSHIP (THIRD YEAR PART-II)

Time- 288 Hours

Area	Duration	Objectives	Skills	Assignments	Assessment Methods
Urban / rural	6 weeks	Provide comprehensive care to individual family and community	Comprehensive nursing care to the individual , family and community	Integrated practice and group project Health talk – 2 Nursing care plan – 2	Assessment of clinical performance with rating scale Evaluation of group project.

NURSING EDUCATION, INTRODUCTION TO RESEARCH, PROFESSIONAL TRENDS & ADJUSTMENT & NURSING ADMINISTRATION & WARD MANAGEMENT

Placement: Internship (3rd years Part II)

Time: 120 Hours

Nursing Education- 20 hours

Introduction to Research- 30 hours

Professional Trends and Adjustment- 30 hours

Nursing Administration and Ward Management- 40 hours

NURSING EDUCATION

Course Description:-

This course is designed to introduce the students to the concept of teaching as an integral part of nursing practice.

General Objective:-

Upon completion of this course, the students shall able to:

1. Explain the concept of teaching
2. Describe techniques used for teaching.

Total Hours: 20

Unit	Learning objectives	Contents	Hr	Teaching learning activities	Method of Assessment
I	Describe the concept of education	Introduction a) Education - Meaning, aims, scope and purposes,	2	Lecture cum discussion	Short answers Objective type
II	Explain the process of teaching and learning	Teaching learning process a) Basic principles b) Characteristics of teaching and learning c) Teaching responsibility of a nurse d) Preparation of teaching plan	4	Lecture cum discussion	Short answers Objective type Evaluation of teaching plan
III	Narrate the methods of teaching Describe the clinical teaching methods	Methods of teaching a) Methods of teaching b) Clinical teaching methods - Case method - Bed side clinic - Nursing rounds - Nursing conference (individual and group) - Process recording.	14	Lecture cum discussion	Short answer Objective type Evaluation of planned as well as incidental health teaching

INTRODUCTION TO RESEARCH

Course Description:-

This course is designed to develop fundamental abilities and attitude in the students towards scientific methods of investigation and utilization of research finding so as to improve practice of nursing.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe the use of research in the practice of nursing
2. Describe the scientific methods of investigation used in nursing.
3. Participate in research activities in the health care settings.

Total Hours: 30

Unit	Learning Objectives	Contents	Hr.	Teaching learning activities	Assessment Method
I	Discuss the importance of research in Nursing	Introduction a) Definition b) Terminology related to research c) Need and importance of nursing research d) Characteristics of good research	3	Lecture cum discussion	Short answers Objective type
II	Describe the research process	Research process a) Purposes and objectives b) Steps in research process	3	Lecture cum discussion	Short answer Essay type
III	Describe the various research approaches	Research approaches and designs a) Types b) Methods c) Advantages and disadvantages	5	Lecture cum discussion	Short answer Essay type
IV	Describe the various data collection methods	Data collection process a) Meaning b) Methods and instruments of data collection	5	Lecture cum discussion	Short answer Essay type
V	List the steps involved in data analysis	Analysis of data a) Compilation b) Tabulation c) Classification d) Summarization e) Presentation and interpretation of data using descriptive statistic	6	Lecture cum discussion Reading the research articles	Short answer Essay type
VI	Describe the importance of statistics in research	Introduction to statistics a) Definition b) Use of statistics c) Scales of measurement d) Frequency distribution e) Mean, median, mode and standard deviation.	6	Lecture cum discussion	Short answer Essay type
VII	Describe the utilization of research in nursing practice	Utilization of research in nursing practice - Evidence based practice	2	Lecture cum discussion	Short answer Essay type

PROFESSIONAL TRENDS AND ADJUSTMENT

Course Description:-

This course is designed to help students develop an understanding of the career opportunities available for professional development.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe nursing as a profession.
2. Identify various professional responsibilities of a nurse.
3. Describe various professional organizations related to nursing.
4. Identify the need for in-service and continuing education in nursing
5. Demonstration skills in application of knowledge of professional etiquettes in the practice of nursing in any health care setting.

Total Hours: 30 hours

S. No	Learning objectives	Contents	Hr.	Teaching learning activities	Assessment methods
I	Describe nursing as a profession	Nursing as a profession a) Definition of profession b) Criteria of a profession and nursing profession c) Evolution of Nursing Profession in India d) Educational preparation of a professional nurse e) Qualities/ Characteristics and role of a professional nurse	4	Lecture cum discussion	Short answer Objective type Essay type
II	Explain various aspects of Professional ethics	Professional ethics a) Meaning and relationship of professional ethics and etiquettes b) Code of ethics for nurse by ICN c) Standards for nursing practice (INC) d) Etiquettes for employment: locating posting, applying and accepting a position, resignation from a position.	6	Lecture cum discussion Assignment: Application for job acceptance & job resignation	Short answer Essay type
III	Discuss the importance of continuing education in personal and professional development	Personal and professional development a) Continuing education - Meaning and importance - Scope - Identifying opportunities	10	Lecture cum discussion	Short answer Essay type

S. No	Learning objectives	Contents	Hr.	Teaching learning activities	Assessment methods
		b) Career in Nursing - Opportunities available in Nursing in Hospital, Community teaching and other related special organization. c) In-service education - Definition - Value - Need participation in committee procedures - Nursing in the future		Draw a career ladder in nursing in reference to international influence and financial aid.	
IV	Discuss the significance of legislation in Nursing	Legislation in nursing - Purpose and importance of laws in Nursing - Legal Terms - Common legal hazards in Nursing - Laws and regulations related to health care providers in India at different levels - Service and institutional rules - Regulation of nursing education - Registration and reciprocities	5	Lecture cum discussion	Assignment
V	List the various organizations related to health and nursing profession and briefly describe their function	Profession and related organizations - Regulatory bodies: Indian Nursing Council, State Nursing Council - Professional organizations: - Trained Nurses Association of India, - Students Nurses Association, - Nurses League of the Christian Medical Association of India, - International Council of Nurses (ICN), - International Confederation of Midwives etc. - Related organization and their contribution to nursing: World Health Organization, Red cross and St. John's Ambulance, Colombo plan, UNICEF, World Bank etc.	5	Lecture cum discussion Observational visits to State Nursing Council and Local TNAI office	Report of visit to the council Short answers Essay type

NURSING ADMINISTRATION AND WARD MANAGEMENT

Course Description:-

This course is designed to help the student to understand the basic principles of administration and its application to the management of ward and health care unit.

General Objective:-

Upon completion of this course, the students shall able to:

1. Describe the meaning and principles of administration.
2. Apply the principles of administration in practice of nursing
3. Plan the nursing service in the ward and community health settings.
4. Describe the importance of good administration in the day to day nursing service in varied health care setting.

Total Hours: 40

Unit	Learning Objectives	Contents	Hr	Teaching learning activities	Assessment methods
I	Describe the meaning , philosophy and principles of administration	Introduction a) Administration and management - Meaning - Philosophy - Elements and principles - Significance	4	Lecture cum discussion	Short answers Objective type Essay type
II	Describe the management process	Management process a) Planning - Importance - Purpose - Types of planning b) Organization - Principles of organization - Organization chart of hospital/ward/ PHC/ Sub center c) Staffing - Scheduling - Recruitment, selection, deployment, retaining, promotion, superannuation - Personnel management - Job description - Job specification - Staff development and staff welfare d) Directing e) Co-ordination and control - Quality management f) Budgeting g) Policies of hospital and various department of the hospital	15	Lecture cum discussion Companion of organization charts	Short answers Essay type Objective type Written test Evaluation of the organization chart prepared by students.

Unit	Learning Objectives	Contents	Hr	Teaching learning activities	Assessment methods
IV	Explain the administration of different health care units	Administration of hospital/department/ unit/ ward a) Health centre/ unit physical layout b) Safety measures for prevention of accidents and infections c) Legal responsibilities of a nurse d) Leadership styles e) Problem solving : process and approach, steps and methods of dealing with complaints of patients and other health team members. f) Records and reports: meaning, types, importance.	9	Lecture cum discussion Role play Group work on physical layout Reading notes	Short answers Objective type Essay type
V	Discuss the importance of maintaining supplies and equipment for effective administration	Management of equipment supplies. a) Maintenance of supplies & equipment (preventive maintenance) b) Handing over and taking over of inventory c) Indent and ordering of supplies and equipment d) Problem solving : process and approach, steps and methods of dealing with supplies and equipment.	7	Lecture cum discussion Role play Group project on problem solving	Short answers Objective type Essay type Evaluation of the report on Group project
VI	Discuss the cost and financing of health services in India	Cost and financing of health care a) Cost of health care b) Health financing c) National health plans (annual and five year plans) and outlays, role of state and central government in allocation of funds d) Health insurance- types, issues etc.	5	Lecture cum discussion	Short answer Test

BSC

Nursing

Syllabus

SYLLABUS

COMMUNICATIVE ENGLISH

PLACEMENT: 1 SEMESTER

THEORY: 2 Credits (40 hours)

DESCRIPTION: The course is designed to enable students to enhance their ability to speak and write the language (and use English) required for effective communication in their professional work. Students will practice their skills in verbal and written English during clinical and classroom experience.

COMPETENCIES: On completion of the course, the students will be able to

1. Identify the significance of Communicative English for healthcare professionals.

2. Apply the concepts and principles of English Language use in professional development such as pronunciation, vocabulary, grammar, paraphrasing, voice modulation, Spelling, pause and silence.
3. Demonstrate attentive listening in different hypothetical situations.
4. Converse effectively, appropriately and timely within the given context and the individual or team they are communicating with either face to face or by other means.
5. Read, interpret and comprehend content in text, flow sheet, framework, figures, tables, reports, anecdotes etc.
6. Analyse the situation and apply critical thinking strategies.
7. Enhance expressions through writing skills.
8. Apply LSRW (Listening, Speaking, Reading and Writing) Skill in combination to learn, teach, educate and share information, ideas and results.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	3 (T)	Identify the significance of communicative English	Communication • What is communication? • What are communication roles of listeners, speakers, readers and writers as healthcare professionals?	• Definitions with examples, illustrations and explanations • Identifying competencies/ communicative strategies in LSRW • Reading excerpts on the above and interpreting them through tasks	• Checking for understanding through tasks
II	5 (T)	Describe concepts and principles of Language (English) use in professional development such as pronunciation, vocabulary, grammar, paraphrasing, voice modulation, spelling, pause and silence	Introduction to LSRGW • L – Listening: Different types of listening • S – Speaking: Understanding Consonants, Vowels, Word and Sentence Stress, Intonation • R – Reading: Medical vocabulary, • Gr – Grammar: Understanding tenses, linkers • W – Writing simple sentences and short paragraphs – emphasis on correct grammar	• Exercises on listening to news, announcements, telephone conversations and instructions from others • Information on fundamentals of Speech – Consonant, Vowel, Stress and Intonation with tasks based on these through audio/video and texts • Reading a medical dictionary/ glossary of medical terms with matching exercises • Information on tenses and basic concepts of correct grammar through fill in the blanks, true/false questions	• Through 'check your understanding' exercises

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
III	5 (T)	Demonstrate attentive listening in different hypothetical situations	Attentive Listening - Focusing on listening in different situations – announcements, descriptions, narratives, instructions, discussions, demonstrations - Reproducing Verbatim - Listening to academic talks/ lectures - Listening to presentation	- Listening to announcements, news, documentaries with tasks based on listening - With multiple choice, Yes/No and fill in the blank activities	- Checking individually against correct answers - Listening for specific information - Listening for overall meaning and instructions - Listening to attitudes and opinions - Listening to audio, video and identify key points
IV	9 (T)	Converse effectively, appropriately and timely within the given context and the individual or team they are communicating with either face to face or other means	Speaking – Effective Conversation - Conversation situations – informal, formal and neutral - Factors influencing way of speaking – setting, topic, social relationship, attitude and language - Greetings, introductions, requesting, asking for and giving permission, speaking personally and casual conversations - Asking for information, giving instructions and directions - Agreeing and disagreeing, giving opinions - Describing people, places, events and things, narrating, reporting & reaching conclusions - Evaluating and comparing - Complaints and suggestions - Telephone conversations - Delivering presentations	- Different types of speaking activities related to the content - Guided with prompts and free discussions - Presentation techniques - Talking to peers and other adults. - Talking to patients and Patient attenders - Talking to other healthcare professionals - Classroom conversation - Scenario based learning tasks	- Individual and group/peer assessment through live speaking tests - Presentation of situation in emergency and routine - Handoff - Reporting in doctors/nurses' rounds - Case presentation - Face to face oral communication - Speaking individually (Nurse to nurse/patient/ doctor) and to others in the group - Telephonic talking
V	5 (T)	Read, interpret and comprehend content in text, flow sheet, framework, figures, tables, reports, anecdotes	Reading - Reading strategies, reading notes and messages - Reading relevant articles and news items - Vocabulary for everyday activities, abbreviations and medical vocabulary - Understanding visuals, graphs, figures and notes on instructions	- Detailed tasks and exercises on reading for information, inference and evaluation - Vocabulary games and puzzles for medical lexis	- Reading/ summarizing/ justifying answers orally - Patient document - Doctor's prescription of care - Journal/news

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Reading reports and interpreting them • Using idioms and phrases, spotting errors, vocabulary for presentations • Remedial Grammar	• Grammar activities	• reading and interpretation • Notes/Reports
VI	5 (T)	Enhance expressions through writing skills	Writing Skills • Writing patient history • Note taking • Summarising • Anecdotal records • Letter writing • Diary/Journal writing • Report writing • Paper writing skills • Abstract writing	• Writing tasks with focus on task fulfilment, coherence and cohesion, appropriate vocabulary and correct grammar • Guided and free tasks • Different kinds of letter writing tasks	• Paper based assessment by the teacher/ trainer against set band descriptors • Presentation of situation • Documentation • Report writing • Paper writing skills • Verbatim reproducing • Letter writing • Resume/CV
VII	8 (T)	Apply LSRW Skill in combination to learn, teach, educate and share information, ideas and results	LSRW Skills • Critical thinking strategies for listening and reading • Oral reports, presentations • Writing instructions, letters and reports • Error analysis regarding LSRW	• Valuating different options/multiple answers and interpreting decisions through situational activities • Demonstration – individually and in groups • Group Discussion • Presentation • Role Play • Writing reports	• Consolidated assessment orally and through written tasks/exercises

APPLIED ANATOMY

PLACEMENT: 1 SEMESTER

THEORY: 3 Credits (60 hours)

DESCRIPTION: The course is designed to assist student to recall and further acquire the knowledge of the normal structure of human body, identify alteration in anatomical structure with emphasis on clinical application to practice nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Describe anatomical terms.
2. Explain the general and microscopic structure of each system of the body.
3. Identify relative positions of the major body organs as well as their general anatomic locations.
4. Explore the effect of alterations in structure.
5. Apply knowledge of anatomic structures to analyze clinical situations and therapeutic applications.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	8 (T)	Define the terms relative to the anatomical position Describe the anatomical planes Define and describe the terms used to describe movements Organization of human body and structure of cell, tissues membranes and glands Describe the types of cartilage Compare and contrast the features of skeletal, smooth and cardiac muscle	Introduction to anatomical terms and organization of the human body • Introduction to anatomical terms relative to position – anterior, ventral, posterior dorsal, superior, inferior, median, lateral, proximal, distal, superficial, deep, prone, supine, palmar and plantar • Anatomical planes (axial/ transverse/ horizontal, sagittal/vertical plane and coronal/frontal/oblique plane) • Movements (flexion, extension, abduction, adduction, medial rotation, lateral rotation, inversion, eversion, supination, pronation, plantar flexion, dorsal flexion and circumduction) • Cell structure, Cell division • Tissue – definition, types, characteristics, classification, location • Membrane, glands – classification and structure • Identify major surface and bony landmarks in each body region, Organization of human body • Hyaline, fibro cartilage, elastic cartilage • Features of skeletal, smooth and cardiac muscle • Application and implication in nursing	• Lecture cum Discussion • Use of models • Video demonstration • Use of microscopic slides • Lecture cum Discussion • Video/Slides • Anatomical Torso	• Quiz • MCQ • Short answer
II	6 (T)	Describe the structure of respiratory system Identify the muscles of respiration and examine their contribution to the mechanism of breathing	The Respiratory system • Structure of the organs of respiration • Muscles of respiration • Application and implication in nursing	• Lecture cum Discussion • Models • Video/Slides	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
III	6 (T)	Describe the structure of digestive system	The Digestive system • Structure of alimentary canal and accessory organs of digestion • Application and implications in nursing	• Lecture cum Discussion • Video/Slides • Anatomical Torso	• Short answer • Objective type
IV	6 (T)	Describe the structure of circulatory and lymphatic system.	The Circulatory and Lymphatic system • Structure of blood components, blood vessels – Arterial and Venous system • Position of heart relative to the associated structures • Chambers of heart, layers of heart • Heart valves, coronary arteries • Nerve and blood supply to heart • Lymphatic tissue • Veins used for IV injections • Application and implication in nursing	• Lecture • Models • Video/Slides	• Short answer • MCQ
V	4 (T)	Identify the major endocrine glands and describe the structure of endocrine Glands	The Endocrine system • Structure of Hypothalamus, Pineal Gland, Pituitary gland, Thyroid, Parathyroid, Thymus, Pancreas and Adrenal glands	• Lecture • Models/charts	• Short answer • Objective type
VI	4 (T)	Describe the structure of various sensory organs	The Sensory organs • Structure of skin, eye, ear, nose and tongue • Application and implications in nursing	• Lecture • Explain with Video/ models/charts	• Short answer • MCQ
VII	10 (T)	Describe anatomical position and structure of bones and joints Identify major bones that make up the axial and appendicular skeleton Classify the joints Identify the application and implications in nursing Describe the structure of muscle	The Musculoskeletal system: The Skeletal system • Anatomical positions • Bones – types, structure, growth and ossification • Axial and appendicular skeleton • Joints – classification, major joints and structure • Application and implications in nursing	• Review – discussion • Lecture • Discussions • Explain using charts, skeleton and loose bones and torso • Identifying muscles involved in nursing procedures in lab	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Apply the knowledge in performing nursing procedures/skills	The Muscular system • Types and structure of muscles • Muscle groups – muscles of the head, neck, thorax, abdomen, pelvis, upper limb and lower limbs • Principal muscles – deltoid, biceps, triceps, respiratory, abdominal, pelvic floor, pelvic floor muscles, gluteal muscles and vastus lateralis • Major muscles involved in nursing procedures		
VIII	5 (T)	Describe the structure of renal system	The Renal system • Structure of kidney, ureters, bladder, urethra • Application and implication in nursing	• Lecture • Models/charts	• MCQ • Short answer
IX	5 (T)	Describe the structure of reproductive system	The Reproductive system • Structure of male reproductive organs • Structure of female reproductive organs • Structure of breast	• Lecture • Models/charts	• MCQ • Short answer
X	6 (T)	Describe the structure of nervous system including the distribution of the nerves, nerve plexuses Describe the ventricular system	The Nervous system • Review Structure of neurons • CNS, ANS and PNS (Central, autonomic and peripheral) • Structure of brain, spinal cord, cranial nerves, spinal nerves, peripheral nerves, functional areas of cerebral cortex • Ventricular system – formation, circulation, and drainage • Application and implication in nursing	• Lecture • Explain with models • Video slides	• MCQ • Short answer

Note: Few lab hours can be planned for visits, observation and handling

(less than 1 credit lab hours are not specified separately)

APPLIED PHYSIOLOGY

PLACEMENT: I SEMESTER

THEORY: 3 Credits (60 hours)

DESCRIPTION: The course is designed to assist student to acquire comprehensive knowledge of the normal functions of the organ systems of the human body to facilitate understanding of physiological basis of health, identify alteration in functions and provide the student with the necessary physiological knowledge to practice nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Develop understanding of the normal functioning of various organ systems of the body.
2. Identify the relative contribution of each organ system towards maintenance of homeostasis.
3. Describe the effect of alterations in functions.
4. Apply knowledge of physiological basis to analyze clinical situations and therapeutic applications.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	4 (T)	Describe the physiology of cell, tissues, membranes and glands	General Physiology – Basic concepts - Cell physiology including transportation across cell membrane - Body fluid compartments, Distribution of total body fluid, intracellular and extracellular compartments, major electrolytes and maintenance of homeostasis - Cell cycle - Tissue – formation, repair - Membranes and glands – functions - Application and implication in nursing	- Review – discussion - Lecture cum Discussion - Video demonstrations	- Quiz - MCQ - Short answer
II	6 (T)	Describe the physiology and mechanism of respiration Identify the muscles of respiration and examine their contribution to the mechanism of breathing	Respiratory system - Functions of respiratory organs - Physiology of respiration - Pulmonary circulation – functional features - Pulmonary ventilation, exchange of gases - Carriage of oxygen and carbon-dioxide, Exchange of gases in tissue - Regulation of respiration - Hypoxia, cyanosis, dyspnea, periodic breathing - Respiratory changes during exercise - Application and implication in nursing	- Lecture - Video slides	- Essay - Short answer - MCQ
III	8 (T)	Describe the functions of digestive system	Digestive system - Functions of the organs of digestive tract - Saliva – composition, regulation of secretion and functions of saliva - Composition and function of gastric juice, mechanism and regulation of gastric secretion - Composition of pancreatic juice, function, regulation of pancreatic secretion - Functions of liver, gall bladder and pancreas - Composition of bile and function - Secretion and function of small and large intestine - Movements of alimentary tract - Digestion in mouth, stomach, small intestine, large intestine, absorption of food - Application and implications in nursing	- Lecture cum Discussion - Video slides	- Essay - Short answer - MCQ
IV	6 (T)	Explain the functions of the	Circulatory and Lymphatic system Functions of heart, conduction system,	Lecture	Short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		heart, and physiology of circulation	cardiac cycle, Stroke volume and cardiac output • Blood pressure and Pulse • Circulation – principles, factors influencing blood pressure, pulse • Coronary circulation, Pulmonary and systemic circulation • Heart rate – regulation of heart rate • Normal value and variations • Cardiovascular homeostasis in exercise and posture • Application and implication in nursing	• Discussion • Video/Slides	• MCQ
V	5 (T)	Describe the composition and functions of blood	Blood • Blood – Functions, Physical characteristics • Formation of blood cells • Erythropoiesis – Functions of RBC, RBC life cycle • WBC – types, functions • Platelets – Function and production of platelets • Clotting mechanism of blood, clotting time, bleeding time, PTT • Hemostasis – role of vasoconstriction, platelet plug formation in hemostasis, coagulation factors, intrinsic and extrinsic pathways of coagulation • Blood groups and types • Functions of reticuloendothelial system, immunity • Application in nursing	• Lecture • Discussion • Videos	• Essay • Short answer • MCQ
VI	5 (T)	Identify the major endocrine glands and describe their functions	The Endocrine system • Functions and hormones of Pineal Gland, Pituitary gland, Thyroid, Parathyroid, Thymus, Pancreas and Adrenal glands. • Other hormones • Alterations in disease • Application and implication in nursing	• Lecture • Explain using charts	• Short answer • MCQ
VII	4 (T)	Describe the structure of various sensory organs	The Sensory Organs • Functions of skin • Vision, hearing, taste and smell • Errors of refraction, aging changes • Application and implications in nursing	• Lecture • Video	• Short answer • MCQ
VIII	6 (T)	Describe the functions of	Musculoskeletal system	• Lecture	• Structured essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		bones, joints, various types of muscles, its special properties and nerves supplying them	- Bones – Functions, movements of bones of axial and appendicular skeleton, Bone healing - Joints and joint movements - Alteration of joint disease - Properties and Functions of skeletal muscles – mechanism of muscle contraction - Structure and properties of cardiac muscles and smooth muscles - Application and implication in nursing	- Discussion - Video presentation	- Short answer - MCQ
IX	4 (T)	Describe the physiology of renal system	Renal system - Functions of kidney in maintaining homeostasis - GFR - Functions of ureters, bladder and urethra - Micturition - Regulation of renal function - Application and implication in nursing	- Lecture - Charts and models	- Short answer - MCQ
X	4 (T)	Describe the structure of reproductive system	The Reproductive system - Female reproductive system – Menstrual cycle, function and hormones of ovary, oogenesis, fertilization, implantation, Functions of breast - Male reproductive system – Spermatogenesis, hormones and its functions, semen - Application and implication in providing nursing care	- Lecture - Explain using charts, models, specimens	- Short answer - MCQ
XI	8 (T)	Describe the functions of brain, physiology of nerve stimulus, reflexes, cranial and spinal nerves	Nervous system - Overview of nervous system - Review of types, structure and functions of neurons - Nerve impulse - Review functions of Brain-Medulla, Pons, Cerebrum, Cerebellum - Sensory and Motor Nervous system - Peripheral Nervous system - Autonomic Nervous system - Limbic system and higher mental Functions- Hippocampus, Thalamus, Hypothalamus - Vestibular apparatus - Functions of cranial nerves - Autonomic functions - Physiology of Pain-somatic, visceral and referred	- Lecture cum Discussion - Video slides	- Brief structured essays - Short answer - MCQ - Critical reflection

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Reflexes • CSF formation, composition, circulation of CSF, blood brain barrier and blood CSF barrier • Application and implication in nursing		

Note: Few lab hours can be planned for visits, observation and handling (less than 1 credit lab hours are not specified separately)

APPLIED SOCIOLOGY

PLACEMENT: 1 SEMESTER

THEORY: 3 Credits (60 hours)

DESCRIPTION: This course is designed to enable the students to develop understanding about basic concepts of sociology and its application in personal and community life, health, illness and nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Identify the scope and significance of sociology in nursing.
2. Apply the knowledge of social structure and different culture in a society in identifying social needs of sick clients.
3. Identify the impact of culture on health and illness.
4. Develop understanding about types of family, marriage and its legislation.
5. Identify different types of caste, class, social change and its influence on health and health practices.
6. Develop understanding about social organization and disorganization and social problems in India.
7. Integrate the knowledge of clinical sociology and its uses in crisis intervention.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	1 (T)	Describe the scope and significance of sociology in nursing	Introduction • Definition, nature and scope of sociology • Significance of sociology in nursing	• Lecture • Discussion	• Essay • Short answer
II	15 (T)	Describe the individualization, Groups, processes of Socialization, social change and its importance	Social structure • Basic concept of society, community, association and institution • Individual and society • Personal disorganization • Social group – meaning, characteristics, and classification. • Social processes – definition and forms, Co-operation, competition, conflict, accommodation, assimilation, isolation • Socialization – characteristics, process, agencies of socialization • Social change – nature, process, and role of nurse	• Lecture cum Discussion	• Essay • Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			• Structure and characteristics of urban, rural and tribal community. • Major health problems in urban, rural and tribal communities • Importance of social structure in nursing profession		
III	8 (T)	Describe culture and its impact on health and disease	Culture • Nature, characteristic and evolution of culture • Diversity and uniformity of culture • Difference between culture and civilization • Culture and socialization • Transcultural society • Culture, Modernization and its impact on health and disease	• Lecture • Panel discussion	• Essay • Short answer
IV	8 (T)	Explain family, marriage and legislation related to marriage	Family and Marriage • Family – characteristics, basic need, types and functions of family • Marriage – forms of marriage, social custom relating to marriage and importance of marriage • Legislation on Indian marriage and family. • Influence of marriage and family on health and health practices	• Lecture	• Essay • Short answer • Case study report
V	8 (T)	Explain different types of caste and classes in society and its influence on health	Social stratification • Introduction – Characteristics & forms of stratification • Function of stratification • Indian caste system – origin and characteristics • Positive and negative impact of caste in society. • Class system and status • Social mobility-meaning and types • Race – concept, criteria of racial classification • Influence of class, caste and race system on health.	• Lecture • Panel discussion	• Essay • Short answer • Objective type
VI	15 (T)	Explain social organization, disorganization, social problems and role of nurse in reducing social problems	Social organization and disorganization • Social organization – meaning, elements and types • Voluntary associations • Social system – definition, types, role and status as structural element of social system. • Interrelationship of institutions • Social control – meaning, aims and process of social control	• Lecture • Group discussion • Observational visit	• Essay • Short answer • Objective type • Visit report

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Social norms, moral and values • Social disorganization – definition, causes, Control and planning • Major social problems – poverty, housing, food supplies, illiteracy, prostitution, dowry, Child labour, child abuse, delinquency, crime, substance abuse, HIV/AIDS, COVID-19 • Vulnerable group – elderly, handicapped, minority and other marginal group. • Fundamental rights of individual, women and children • Role of nurse in reducing social problem and enhance coping • Social welfare programs in India		
VII	5 (T)	Explain clinical sociology and its application in the hospital and community	Clinical sociology • Introduction to clinical sociology • Sociological strategies for developing services for the abused • Use of clinical sociology in crisis intervention	• Lecture, • Group discussion • Role play	• Essay • Short answer

APPLIED PSYCHOLOGY

PLACEMENT: I SEMESTER

THEORY: 3 Credits (60 Hours)

DESCRIPTION: This course is designed to enable the students to develop understanding about basic concepts of psychology and its application in personal and community life, health, illness and nursing. It further provides students opportunity to recognize the significance and application of soft skills and self-empowerment in the practice of nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Identify the importance of psychology in individual and professional life.
2. Develop understanding of the biological and psychological basis of human behaviour.
3. Identify the role of nurse in promoting mental health and dealing with altered personality.
4. Perform the role of nurses applicable to the psychology of different age groups.
5. Identify the cognitive and affective needs of clients.
6. Integrate the principles of motivation and emotion in performing the role of nurse in caring for emotionally sick client.
7. Demonstrate basic understanding of psychological assessment and nurse's role.
8. Apply the knowledge of soft skills in workplace and society.
9. Apply the knowledge of self-empowerment in workplace, society and personal life.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	2 (T)	Describe scope, branches and significance of psychology in nursing	Introduction • Meaning of Psychology • Development of psychology – Scope, branches and methods of psychology • Relationship with other subjects • Significance of psychology in nursing • Applied psychology to solve everyday issues	• Lecture cum Discussion	• Essay • Short answer
II	4 (T)	Describe biology of human behaviour	Biological basis of behavior –Introduction • Body mind relationship • Genetics and behaviour • Inheritance of behaviour • Brain and behaviour. • Psychology and sensation – sensory process – normal and abnormal	• Lecture • Discussion	• Essay • Short answer
III	5 (T)	Describe mentally healthy person and defense mechanisms	Mental health and mental hygiene • Concept of mental health and mental hygiene • Characteristic of mentally healthy person • Warning signs of poor mental health • Promotive and preventive mental health strategies and services • Defense mechanism and its implication • Frustration and conflict – types of conflicts and measurements to overcome • Role of nurse in reducing frustration and conflict and enhancing coping • Dealing with ego	• Lecture • Case discussion • Role play	• Essay • Short answer • Objective type
IV	7 (T)	Describe psychology of people in different age groups and role of nurse	Developmental psychology • Physical, psychosocial and cognitive development across life span – Prenatal through early childhood, middle to late childhood through adolescence, early and mid-adulthood, late adulthood, death and dying • Role of nurse in supporting normal growth and development across the life span • Psychological needs of various groups in health and sickness – Infancy, childhood, adolescence, adulthood and older adult • Introduction to child psychology and role of nurse in meeting the psychological needs of	• Lecture • Group discussion	• Essay • Short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			children • Psychology of vulnerable individuals – challenged, women, sick etc. • Role of nurse with vulnerable groups		
V	4 (T)	Explain personality and role of nurse in identification and improvement in altered personality	Personality • Meaning, definition of personality • Classification of personality • Measurement and evaluation of personality – Introduction • Alteration in personality • Role of nurse in identification of individual personality and improvement in altered personality	• Lecture • Discussion • Demonstration	• Essay and short answer • Objective type
VI	16 (T)	Explain cognitive process and their applications	Cognitive process • Attention – definition, types, determinants, duration, degree and alteration in attention • Perception – Meaning of Perception, principles, factor affecting perception, • Intelligence – Meaning of intelligence – Effect of heredity and environment in intelligence, classification, Introduction to measurement of intelligence tests – Mental deficiencies • Learning – Definition of learning, types of learning, Factors influencing learning – Learning process, Habit formation • Memory—meaning and nature of memory, factors influencing memory, methods to improve memory, forgetting • Thinking – types, level, reasoning and problem solving. • Aptitude – concept, types, individual differences and variability • Psychometric assessment of cognitive processes – Introduction • Alteration in cognitive processes	• Lecture • Discussion	• Essay and short answer • Objective type
VII	6 (T)	Describe motivation, emotion, attitude and role of nurse in emotionally sick client	Motivation and emotional processes • Motivation – meaning, concept, types, theories of motivation, motivation cycle, biological and special motives • Emotions – Meaning of emotions, development of emotions, alteration of emotion, emotions in sickness – handling emotions in self and other • Stress and adaptation – stress, stressor, cycle, effect, adaptation and coping	• Lecture • Group discussion	• Essay and short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Attitudes – Meaning of attitudes, nature, factor affecting attitude, attitudinal change, Role of attitude in health and sickness • Psychometric assessment of emotions and attitude – Introduction • Role of nurse in caring for emotionally sick client		
VIII	4 (T)	Explain psychological assessment and tests and role of nurse	Psychological assessment and tests – introduction • Types, development, characteristics, principles, uses, interpretation • Role of nurse in psychological assessment	• Lecture • Discussion • Demonstration	• Short answer • Assessment of practice
IX	10 (T)	Explain concept of soft skill and its application in work place and society	Application of soft skill • Concept of soft skill • Types of soft skill – visual, aural and communication skill • The way of communication • Building relationship with client and society • Interpersonal Relationships (IPR): Definition, Types, and Purposes, Interpersonal skills, Barriers, Strategies to overcome barriers • Survival strategies – managing time, coping stress, resilience, work – life balance • Applying soft skill to workplace and society – Presentation skills, social etiquette, telephone etiquette, motivational skills, teamwork etc. • Use of soft skill in nursing	• Lecture • Group discussion • Role play • Refer/Complete Soft skills module	• Essay and short answer
X	2 (T)	Explain self-empowerment	Self-empowerment • Dimensions of self-empowerment • Self-empowerment development • Importance of women's empowerment in society • Professional etiquette and personal grooming • Role of nurse in empowering others	• Lecture • Discussion	• Short answer • Objective type

NURSING FOUNDATION - I (including First Aid module)

PLACEMENT: I SEMESTER

THEORY: 6 Credits (120 hours)

PRACTICUM: Skill Lab: 2 Credits (80 hours) and Clinical: 2 Credits (160 hours)

DESCRIPTION: This course is designed to help novice nursing students develop knowledge and competencies required to provide evidence-based, comprehensive basic nursing care for adult patients, using nursing process approach

COMPETENCIES: On completion of the course, the students will be able to

1. Develop understanding about the concept of health, illness and scope of nursing within health care services.
2. Apply values, code of ethics and professional conduct in professional life.
3. Apply the principles and methods of effective communication in establishing communication links with patients, families and other health team members.
4. Develop skill in recording and reporting.
5. Demonstrate competency in monitoring and documenting vital signs.
6. Describe the fundamental principles and techniques of infection control and biomedical waste management.
7. Identify and meet the comfort needs of the patients.
8. Perform admission, transfer, and discharge of a patient under supervision applying the knowledge.
9. Demonstrate understanding and application of knowledge in caring for patients with restricted mobility.
10. Perform first aid measures during emergencies.
11. Identify the educational needs of patients and demonstrate basic skills of patient education.

***Mandatory Module used in Teaching/Learning:**

First Aid: 40 Hours (including Basic CPR)

COURSE OUTLINE

T – Theory, SL – Skill Lab

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	5 (T)	Describe the concept of health and illness	Introduction to health and illness • Concept of Health – Definitions (WHO), Dimensions • Maslow's hierarchy of needs • Health – Illness continuum • Factors influencing health • Causes and risk factors for developing illnesses • Illness – Types, illness behavior • Impact of illness on patient and family	• Lecture • Discussion	• Essay • Short answer • Objective type
II	5 (T)	Describe the levels of illness prevention and care, health care services	Health Care Delivery Systems – Introduction of Basic Concepts & Meanings • Levels of Illness Prevention – Primary (Health Promotion), Secondary and Tertiary • Levels of Care – Primary, Secondary and Tertiary • Types of health care agencies/ services – Hospitals, clinics, Hospice, rehabilitation centres, extended care facilities • Hospitals – Types, Organization and	• Lecture • Discussion	• Essay • Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			Functions Health care teams in hospitals – members and their role		
III	12 (T)	Trace the history of Nursing Explain the concept, nature and scope of nursing Describe values, code of ethics and professional conduct for nurses in India	History of Nursing and Nursing as a profession - History of Nursing, History of Nursing in India - Contributions of Florence Nightingale - Nursing – Definition – Nurse, Nursing, Concepts, philosophy, objectives, Characteristics, nature and Scope of Nursing/ Nursing practice, Functions of nurse, Qualities of a nurse, Categories of nursing personnel - Nursing as a profession – definition and characteristics/criteria of profession - Values – Introduction – meaning and importance - Code of ethics and professional conduct for nurses – Introduction	- Lecture - Discussion - Case discussion - Role plays	- Essay - Short answers - Objective type
IV	8 (T) 3 (SL)	Describe the process, principles, and types of communication Explain therapeutic, non-therapeutic and professional communication Communicate effectively with patients, their families and team members	Communication and Nurse Patient Relationship - Communication – Levels, Elements and Process, Types, Modes, Factors influencing communication - Methods of effective communication/therapeutic communication techniques - Barriers to effective communication/non-therapeutic communication techniques - Professional communication - Helping Relationships (Nurse Patient Relationship) – Purposes and Phases - Communicating effectively with patient, families and team members - Maintaining effective human relations and communication with vulnerable groups (children, women, physically and mentally challenged and elderly)	- Lecture - Discussion - Role play and video film on Therapeutic Communication	- Essay - Short answer - Objective type
V	4 (T) 2 (SL)	Describe the purposes, types and techniques of recording and reporting Maintain records and reports accurately	Documentation and Reporting - Documentation – Purposes of Reports and Records - Confidentiality - Types of Client records/Common Record-keeping forms - Methods/Systems of documentation/Recording	- Lecture - Discussion - Demonstration	- Essay - Short answer - Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Guidelines for documentation - Do's and Don'ts of documentation/Legal guidelines for Documentation/Recording - Reporting – Change of shift reports, Transfer reports, Incident reports		
VI	15 (T) 20 (SL)	Describe principles and techniques of monitoring and maintaining vital signs Assess and record vital signs accurately	Vital signs - Guidelines for taking vital signs <i>Body temperature</i> – - Definition, Physiology, Regulation, Factors affecting body temperature - Assessment of body temperature – sites, equipment and technique - Temperature alterations – Hyperthermia, Heat Cramps, Heat Exhaustion, Heatstroke, Hypothermia - Fever/Pyrexia – Definition, Causes, Stages, Types - Nursing Management - Hot and Cold applications <i>Pulse:</i> - Definition, Physiology and Regulation, Characteristics, Factors affecting pulse - Assessment of pulse – sites, equipment and technique - Alterations in pulse <i>Respiration:</i> - Definition, Physiology and Regulation, Mechanics of breathing, Characteristics, Factors affecting respiration - Assessment of respirations – technique - Arterial Oxygen saturation - Alterations in respiration <i>Blood pressure:</i> - Definition, Physiology and Regulation, Characteristics, Factors affecting BP - Assessment of BP – sites, equipment and technique, Common Errors in BP Assessment - Alterations in Blood Pressure - Documenting Vital Signs	- Lecture - Discussion - Demonstration & Re-demonstration	- Essay - Short answer - Objective type - Document the given values of temperature, pulse, and respiration in the graphic sheet - OSCE
VII	3 (T)	Maintain equipment and linen	Equipment and Linen - Types – Disposables and reusable - Linen, rubber goods, glassware, metal, plastics, furniture - Introduction – Indent, maintenance, Inventory		

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
VIII	10 (T) 3 (SL)	Describe the basic principles and techniques of infection control and biomedical waste management	Introduction to Infection Control in Clinical setting Infection • Nature of infection • Chain of infection • Types of infection • Stages of infection • Factors increasing susceptibility to infection • Body defenses against infection – Inflammatory response & Immune response • Health care associated infection (Nosocomial infection) Introductory concept of Asepsis – Medical & Surgical asepsis Precautions • Hand Hygiene • (Hand washing and use of hand Rub) • Use of Personal Protective Equipment (PPE) • Standard precautions Biomedical Waste management • Types of hospital waste, waste segregation and hazards – Introduction	• Lecture • Discussion • Demonstration • Observation of autoclaving and other sterilization techniques • Video presentation on medical & surgical asepsis	• Essay • Short answer • Objective type
IX	15 (T) 15 (SL)	Identify and meet the comfort needs of the patients	Comfort, Rest & Sleep and Pain • Comfort ○ Factors Influencing Comfort ○ Types of beds including latest beds, purposes & bed making ○ Therapeutic positions ○ Comfort devices • Sleep and Rest ○ Physiology of sleep ○ Factors affecting sleep ○ Promoting Rest and sleep ○ Sleep Disorders • Pain (Discomfort) ○ Physiology ○ Common cause of pain ○ Types ○ Assessment – pain scales and narcotic scales	• Lecture • Discussion • Demonstration & Re-demonstration	• Essay • Short answer • Objective type • OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			○ Pharmacological and Non-pharmacological pain relieving measures – Use of narcotics, TENS devices, PCA ○ Invasive techniques of pain management ○ Any other newer measures ○ CAM (Complementary & Alternative healing Modalities)		
X	5 (T) 3 (SL)	Describe the concept of patient environment	Promoting Safety in Health Care Environment • Physical environment – Temperature, Humidity, Noise, Ventilation, Light, Odor, Pest control • Reduction of Physical hazards – fire, accidents • Fall Risk Assessment • Role of nurse in providing safe and clean environment • Safety devices – ○ Restraints – Types, Purposes, Indications, Legal Implications and Consent, Application of Restraints-Skill and Practice guidelines ○ Other Safety Devices – Side rails, Grab bars, Ambu alarms, non-skid slippers etc.	• Lecture • Discussion • Demonstration	• Essay • Short answer • Objective type
XI	6 (T) 2 (SL)	Explain and perform admission, transfer, and discharge of a patient	Hospital Admission and discharge • Admission to the hospital Unit and preparation of unit ○ Admission bed ○ Admission procedure ○ Medico-legal issues ○ Roles and Responsibilities of the nurse • Discharge from the hospital ○ Types – Planned discharge, LAMA and Abscond, Referrals and transfers ○ Discharge Planning ○ Discharge procedure ○ Medico-legal issues ○ Roles and Responsibilities of the nurse ○ Care of the unit after discharge	• Lecture • Discussion • Demonstration	• Essay • Short answer • Objective type
XII	8 (T) 10 (SL)	Demonstrate skill in caring for patients with restricted mobility	Mobility and Immobility • Elements of Normal Movement, Alignment & Posture, Joint Mobility, Balance, Coordinated Movement	• Lecture • Discussion • Demonstration &	• Essay • Short answer • Objective

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Principles of body mechanics • Factors affecting Body Alignment and activity • Exercise – Types and benefits • Effects of Immobility • Maintenance of normal Body Alignment and Activity • Alteration in Body Alignment and mobility • Nursing interventions for impaired Body Alignment and Mobility – assessment, types, devices used, method ◦ Range of motion exercises ◦ Muscle strengthening exercises ◦ Maintaining body alignment – positions ◦ Moving ◦ Lifting ◦ Transferring ◦ Walking • Assisting clients with ambulation • Care of patients with Immobility using Nursing process approach • Care of patients with casts and splints	Re-demonstration	type • OSCE
XIII	4 (T) 2 (SL)	Describe the principles and practice of patient education	Patient education • Patient Teaching – Importance, Purposes, Process • Integrating nursing process in patient teaching	• Discussion • Role plays	• Essay • Short answer • Objective type
XIV	20 (T) 20 (SL)	Explain and apply principles of First Aid during emergencies	First Aid* • Definition, Basic Principles, Scope & Rules • First Aid Management ◦ Wounds, Hemorrhage & Shock ◦ Musculoskeletal Injuries – Fractures, Dislocation, Muscle injuries ◦ Transportation of Injured persons ◦ Respiratory Emergencies & Basic CPR ◦ Unconsciousness ◦ Foreign Bodies – Skin, Eye, Ear, Nose, Throat & Stomach ◦ Burns & Scalds ◦ Poisoning, Bites & Stings ◦ Frostbite & Effects of Heat ◦ Community Emergencies	• Lecture • Discussion • Demonstration & Re-demonstration • Module completion • National Disaster Management Authority (NDMA) / Indian Red Cross Society (IRCS) First Aid module	• Essay • Short answer • Objective type • OSCE

*Mandatory module

CLINICAL PRACTICUM

Clinical Practicum: 2 Credits (160 hours), 10 weeks × 16 hours per week

PRACTICE COMPETENCIES: On completion of the clinical practicum, the students will be able to

1. Maintain effective human relations (projecting professional image)
2. Communicate effectively with patient, families and team members
3. Demonstrate skills in techniques of recording and reporting
4. Demonstrate skill in monitoring vital signs
5. Care for patients with altered vital signs
6. Demonstrate skill in implementing standard precautions and use of PPE
7. Demonstrate skill in meeting the comfort needs of the patients
8. Provide safe and clean environment
9. Demonstrate skill in admission, transfer, and discharge of a patient
10. Demonstrate skill in caring for patients with restricted mobility
11. Plan and provide appropriate health teaching following the principles
12. Acquire skills in assessing and performing First Aid during emergencies.

SKILL LAB**Use of Mannequins and Simulators**

S.No.	Competencies	Mode of Teaching
1.	Therapeutic Communication and Documentation	Role Play
2.	Vital signs	Simulator/Standardized patient
3.	Medical and Surgical Asepsis	Videos/Mannequin
4.	Pain Assessment	Standardized patient
5.	Comfort Devices	Mannequin
6.	Therapeutic Positions	Mannequin
7.	Physical Restraints and Side rails	Mannequin
8.	ROM Exercises	Standardized patient
9.	Ambulation	Standardized patient
10.	Moving and Turning patients in bed	Mannequin
11.	Changing position of helpless patients	Mannequin/Standardized patient
12.	Transferring patients bed to stretcher/wheel chair	Mannequin/Standardized patient
13.	Admission, Transfer, Discharge & Health Teaching	Role Play

CLINICAL POSTINGS – General Medical/Surgical Wards

10 weeks × 16 hours/week = 160 Hours

Clinical Unit	Duration (in Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
General Medical/ Surgical wards	2	Maintain effective human relations (projecting professional image) Communicate effectively with patient, families and team members Demonstrate skills in techniques of recording and reporting	Communication and Nurse patient relationship • Maintaining Communication with patient and family and interpersonal relationship • Documentation and Reporting ◦ Documenting patient care and procedures ◦ Verbal report ◦ Written report		• OSCE
	2	Demonstrate skill in monitoring vital signs Care for patients with altered vital signs Demonstrate skill in implementing standard precautions and use of PPE	Vital signs • Monitor/measure and document vital signs in a graphic sheet ◦ Temperature (oral, tympanic, axillary) ◦ Pulse (Apical and peripheral pulses) ◦ Respiration ◦ Blood pressure ◦ Pulse oximetry • Interpret and report alteration • Cold Applications – Cold Compress, Ice cap, Tepid Sponging • Care of equipment – thermometer, BP apparatus, Stethoscope, Pulse oximeter Infection control in Clinical settings • Hand hygiene • Use of PPE	• Care of patients with alterations in vital signs- I	• Assessment of clinical skills using checklist • OSCE
	3	Demonstrate skill in meeting the comfort needs of the patients	Comfort, Rest & Sleep, Pain and Promoting Safety in Health Care Environment <i>Comfort, Rest & Sleep</i> • Bed making- ◦ Open ◦ Closed ◦ Occupied ◦ Post-operative		• Assessment of clinical skills using checklist • OSCE

Clinical Unit	Duration (in Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
			○ Cardiac bed ○ Fracture bed • Comfort devices ○ Pillows ○ Over bed table/cardiac table ○ Back rest ○ Bed Cradle • Therapeutic Positions ○ Supine ○ Fowlers (low, semi, high) ○ Lateral ○ Prone ○ Sim's ○ Trendelenburg ○ Dorsal recumbent ○ Lithotomy ○ Knee chest <i>Pain</i> • Pain assessment and provision for comfort <i>Promoting Safety in Health Care Environment</i> • Care of Patient's Unit • Use of Safety devices: ○ Side Rails • Restraints (Physical) • Fall risk assessment and Post Fall Assessment	• Fall risk assessment-1	
	2	Demonstrate skill in admission, transfer, and discharge of a patient	Hospital Admission and discharge, Mobility and Immobility and Patient education <i>Hospital Admission and discharge</i> Perform & Document: • Admission • Transfer • Planned Discharge		• Assessment of clinical skills using checklist • OSCE
		Demonstrate skill in caring for patients with restricted mobility	Mobility and Immobility • Range of Motion Exercises • Assist patient in: ○ Moving	• Individual teaching-1	• Assessment of clinical skills using checklist • OSCE

Clinical Unit	Duration (in Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Plan and provide appropriate health teaching following the principles.	○ Turning ○ Logrolling • Changing position of helpless patient • Transferring (Bed to and from chair/wheelchair/ stretcher) <i>Patient education</i>		
	1	Demonstrate skills in assessing and performing First Aid during emergencies	First aid and Emergencies • Bandaging Techniques ○ Basic Bandages: ▪ Circular ▪ Spiral ▪ Reverse-Spiral ▪ Recurrent ▪ Figure of Eight ○ Special Bandages: ▪ Caplin ▪ Eye/Ear Bandage ▪ Jaw Bandage ▪ Shoulder Spica ▪ Thumb spica ▪ Triangular Bandage/ Sling (Head & limbs) ▪ Binders	• Module completion National Disaster Management Authority (NDMA) First Aid module (To complete it in clinicals if not completed during lab)	• Assessment of clinical skills using checklist • OSCE (first aid competencies)

APPLIED BIOCHEMISTRY

PLACEMENT: II SEMESTER

THEORY: 2 credits (40 hours) (includes lab hours also)

DESCRIPTION: The course is designed to assist the students to acquire knowledge of the normal biochemical composition and functioning of human body, its alterations in disease conditions and to apply this knowledge in the practice of nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Describe the metabolism of carbohydrates and its alterations.
2. Explain the metabolism of lipids and its alterations.
3. Explain the metabolism of proteins and amino acids and its alterations.
4. Explain clinical enzymology in various disease conditions.
5. Explain acid base balance, imbalance and its clinical significance.
6. Describe the metabolism of hemoglobin and its clinical significance.
7. Explain different function tests and interpret the findings.
8. Illustrate the immunochemistry.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	8 (T)	Describe the metabolism of carbohydrates and its alterations	Carbohydrates • Digestion, absorption and metabolism of carbohydrates and related disorders • Regulation of blood glucose • Diabetes Mellitus – type 1 and type 2, symptoms, complications & management in brief • Investigations of Diabetes Mellitus ◦ OGTT – Indications, Procedure, Interpretation and types of GTT curve ◦ Mini GTT, extended GTT, GCT, IV GTT ◦ HbA1c (Only definition) • Hypoglycemia – Definition & causes	• Lecture cum Discussion • Explain using charts and slides • Demonstration of laboratory tests	• Essay • Short answer • Very short answer
II	8 (T)	Explain the metabolism of lipids and its alterations	Lipids • Fatty acids – Definition, classification • Definition & Clinical significance of MUFA & PUFA, Essential fatty acids, Trans fatty acids • Digestion, absorption & metabolism of lipids & related disorders • Compounds formed from cholesterol • Ketone bodies (name, types & significance only) • Lipoproteins – types & functions (metabolism not required) • Lipid profile • Atherosclerosis (in brief)	• Lecture cum Discussion • Explain using charts and slides • Demonstration of laboratory tests	• Essay • Short answer • Very short answer
III	9 (T)	Explain the metabolism of amino acids and proteins Identify alterations in disease conditions	Proteins • Classification of amino acids based on nutrition, metabolic rate with examples • Digestion, absorption & metabolism of protein & related disorders • Biologically important compounds synthesized from various amino acids (only names) • In born errors of amino acid metabolism – only aromatic amino acids (in brief) • Plasma protein – types, function & normal values • Causes of proteinuria, hypoproteinemia, hyper-gamma globinemia • Principle of electrophoresis, normal & abnormal electrophoretic patterns (in	• Lecture cum Discussion • Explain using charts, models and slides	• Essay • Short answer • Very short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			brief)		
IV	4 (T)	Explain clinical enzymology in various disease conditions	Clinical Enzymology • Isoenzymes – Definition & properties • Enzymes of diagnostic importance in ◦ Liver Diseases – ALT, AST, ALP, GGT ◦ Myocardial infarction – CK, cardiac troponins, AST, LDH ◦ Muscle diseases – CK, Aldolase ◦ Bone diseases – ALP ◦ Prostate cancer – PSA, ACP	• Lecture cum Discussion • Explain using charts and slides	• Essay • Short answer • Very short answer
V	3 (T)	Explain acid base balance, imbalance and its clinical significance	Acid base maintenance • pH – definition, normal value • Regulation of blood pH – blood buffer, respiratory & renal • ABG – normal values • Acid base disorders – types, definition & causes	• Lecture cum Discussion • Explain using charts and slides	• Short answer • Very short answer
VI	2 (T)	Describe the metabolism of hemoglobin and its clinical significance	Heme catabolism • Heme degradation pathway • Jaundice – type, causes, urine & blood investigations (van den berg test)	• Lecture cum Discussion • Explain using charts and slides	• Short answer • Very short answer
VII	3 (T)	Explain different function tests and interpret the findings	Organ function tests (biochemical parameters & normal values only) • Renal • Liver • Thyroid	• Lecture cum Discussion • Visit to Lab • Explain using charts and slides	• Short answer • Very short answer
VIII	3 (T)	Illustrate the immunochemistry	Immunochemistry • Structure & functions of immunoglobulin • Investigations & interpretation – ELISA	• Lecture cum Discussion • Explain using charts and slides • Demonstration of laboratory tests	• Short answer • Very short answer

Note: Few lab hours can be planned for observation and visits (Less than 1 credit, lab hours are not specified separately).

APPLIED NUTRITION AND DIETETICS

PLACEMENT: II SEMESTER

THEORY: 3 credits (60 hours)

Theory : 45 hours

Lab : 15 hours

DESCRIPTION: The course is designed to assist the students to acquire basic knowledge and understanding of the principles of Nutrition and Dietetics and apply this knowledge in the practice of Nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Identify the importance of nutrition in health and wellness.
2. Apply nutrient and dietary modifications in caring patients.
3. Explain the principles and practices of Nutrition and Dietetics.
4. Identify nutritional needs of different age groups and plan a balanced diet for them.
5. Identify the dietary principles for different diseases.
6. Plan therapeutic diet for patients suffering from various disease conditions.
7. Prepare meals using different methods and cookery rules.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	2 (T)	Define nutrition and its relationship to Health	Introduction to Nutrition <i>Concepts</i> • Definition of Nutrition & Health • Malnutrition – Under Nutrition & Over Nutrition • Role of Nutrition in maintaining health • Factors affecting food and nutrition <i>Nutrients</i> • Classification • Macro & Micronutrients • Organic & Inorganic • Energy Yielding & Non-Energy Yielding <i>Food</i> • Classification – Food groups • Origin	• Lecture cum Discussion • Charts/Slides	• Essay • Short answer • Very short answer
II	3 (T)	Describe the classification, functions, sources and recommended daily allowances (RDA) of carbohydrates Explain BMR and factors affecting BMR	Carbohydrates • Composition – Starches, sugar and cellulose • Recommended Daily Allowance (RDA) • Dietary sources • Functions Energy • Unit of energy – Kcal • Basal Metabolic Rate (BMR) • Factors affecting BMR	• Lecture cum Discussion • Charts/Slides • Models • Display of food items	• Essay • Short answer • Very short answer
III	3 (T)	Describe the classification, Functions, sources	Proteins • Composition	• Lecture cum Discussion • Charts/Slides	• Essay • Short answer • Very short

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		and RDA of proteins.	• Eight essential amino acids • Functions • Dietary sources • Protein requirements – RDA	• Models • Display of food items	answer
IV	2 (T)	Describe the classification, Functions, sources and RDA of fats	Fats • Classification – Saturated & unsaturated • Calorie value • Functions • Dietary sources of fats and fatty acids • Fat requirements – RDA	• Lecture cum Discussion • Charts/Slides • Models • Display of food items	• Essay • Short answer • Very short answer
V	3 (T)	Describe the classification, functions, sources and RDA of vitamins	Vitamins • Classification – fat soluble & water soluble • Fat soluble – Vitamins A, D, E, and K • Water soluble – Thiamine (vitamin B1), Riboflavin (vitamin B2), Nicotinic acid, Pyridoxine (vitamin B6), Pantothenic acid, Folic acid, Vitamin B12, Ascorbic acid (vitamin C) • Functions, Dietary Sources & Requirements – RDA of every vitamin	• Lecture cum Discussion • Charts/Slides • Models • Display of food items	• Essay • Short answer • Very short answer
VI	3 (T)	Describe the classification, functions, sources and RDA of minerals	Minerals • Classification – Major minerals (Calcium, phosphorus, sodium, potassium and magnesium) and Trace elements • Functions • Dietary Sources • Requirements – RDA	• Lecture cum Discussion • Charts/Slides • Models • Display of food items	• Short answer • Very short answer
VII	7 (T) 8 (L)	Describe and plan balanced diet for different age groups, pregnancy, and lactation	Balanced diet • Definition, principles, steps • Food guides – Basic Four Food Groups • RDA – Definition, limitations, uses • Food Exchange System • Calculation of nutritive value of foods • Dietary fibre Nutrition across life cycle • Meal planning/Menu planning – Definition, principles, steps • Infant and Young Child Feeding (IYCF) guidelines – breast feeding, infant foods • Diet plan for different age groups –	• Lecture cum Discussion • Meal planning • Lab session on ◦ Preparation of balanced diet for different categories ◦ Low cost nutritious dishes	• Short answer • Very short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			Children, adolescents and elderly • Diet in pregnancy – nutritional requirements and balanced diet plan • Anemia in pregnancy – diagnosis, diet for anemic pregnant women, iron & folic acid supplementation and counseling • Nutrition in lactation – nutritional requirements, diet for lactating mothers, complementary feeding/ weaning		
VIII	6 (T)	Classify and describe the common nutritional deficiency disorders and identify nurses' role in assessment, management and prevention	Nutritional deficiency disorders • Protein energy malnutrition – magnitude of the problem, causes, classification, signs & symptoms, Severe acute malnutrition (SAM), management & prevention and nurses' role • Childhood obesity – signs & symptoms, assessment, management & prevention and nurses' role • Vitamin deficiency disorders – vitamin A, B, C & D deficiency disorders – causes, signs & symptoms, management & prevention and nurses' role • Mineral deficiency diseases – iron, iodine and calcium deficiencies – causes, signs & symptoms, management & prevention and nurses' role	• Lecture cum Discussion • Charts/Slides • Models	• Essay • Short answer • Very short answer
IX	4 (T) 7 (L)	Principles of diets in various diseases	Therapeutic diets • Definition, Objectives, Principles • Modifications – Consistency, Nutrients, • Feeding techniques. • Diet in Diseases – Obesity, Diabetes Mellitus, CVD, Underweight, Renal diseases, Hepatic disorders Constipation, Diarrhea, Pre and Post-operative period	• Lecture cum Discussion • Meal planning • Lab session on preparation of therapeutic diets	• Essay • Short answer • Very short answer
X	3 (T)	Describe the rules and preservation of nutrients	Cookery rules and preservation of nutrients • Cooking – Methods, Advantages and Disadvantages • Preservation of nutrients • Measures to prevent loss of nutrients during preparation • Safe food handling and Storage of foods • Food preservation • Food additives and food adulteration • Prevention of Food Adulteration Act (PFA) • Food standards	• Lecture cum Discussion • Charts/Slides	• Essay • Short answer • Very short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
XI	4 (T)	Explain the methods of nutritional assessment and nutrition education	Nutrition assessment and nutrition education - Objectives of nutritional assessment - Methods of assessment – clinical examination, anthropometry, laboratory & biochemical assessment, assessment of dietary intake including Food frequency questionnaire (FFQ) method - Nutrition education – purposes, principles and methods	- Lecture cum Discussion - Demonstration - Writing nutritional assessment report	- Essay - Short answer - Evaluation of Nutritional assessment report
XII	3 (T)	Describe nutritional problems in India and nutritional programs	National Nutritional Programs and role of nurse - Nutritional problems in India - National nutritional policy - National nutritional programs – Vitamin A Supplementation, Anemia Mukh Bharat Program, Integrated Child Development Services (ICDS), Mid-day Meal Scheme (MDMS), National Iodine Deficiency Disorders Control Program (NIDDCP), Weekly Iron Folic Acid Supplementation (WIFS) and others as introduced - Role of nurse in every program	Lecture cum Discussion	- Essay - Short answer - Very short answer
XIII	2 (T)	Discuss the importance of food hygiene and food safety Explain the Acts related to food safety	Food safety - Definition, Food safety considerations & measures - Food safety regulatory measures in India – Relevant Acts - Five keys to safer food - Food storage, food handling and cooking - General principles of food storage of food items (ex. milk, meat) - Role of food handlers in food borne diseases - Essential steps in safe cooking practices	Guided reading on related acts	- Quiz - Short answer

Food born diseases and food poisoning are dealt in Community Health Nursing I.

NURSING FOUNDATION - II (including Health Assessment Module)

PLACEMENT: II SEMESTER

THEORY: 6 Credits (120 hours)

PRACTICUM: Skill Lab: 3 Credits (120 hours), Clinical: 4 Credits (320 hours)

DESCRIPTION: This course is designed to help novice nursing students develop knowledge and competencies required to provide evidence-based, comprehensive basic nursing care for adult patients, using nursing process approach.

COMPETENCIES: On completion of the course, the students will be able to

1. Develop understanding about fundamentals of health assessment and perform health assessment in supervised clinical settings

2. Demonstrate fundamental skills of assessment, planning, implementation and evaluation of nursing care using Nursing process approach in supervised clinical settings
3. Assess the Nutritional needs of patients and provide relevant care under supervision
4. Identify and meet the hygienic needs of patients
5. Identify and meet the elimination needs of patient
6. Interpret findings of specimen testing applying the knowledge of normal values
7. Promote oxygenation based on identified oxygenation needs of patients under supervision
8. Review the concept of fluid, electrolyte balance integrating the knowledge of applied physiology
9. Apply the knowledge of the principles, routes, effects of administration of medications in administering medication
10. Calculate conversions of drugs and dosages within and between systems of measurements
11. Demonstrate knowledge and understanding in caring for patients with altered functioning of sense organs and unconsciousness
12. Explain loss, death and grief
13. Describe sexual development and sexuality
14. Identify stressors and stress adaptation modes
15. Integrate the knowledge of culture and cultural differences in meeting the spiritual needs
16. Explain the introductory concepts relevant to models of health and illness in patient care

***Mandatory Module used in Teaching/Learning:**

Health Assessment Module: 40 hours

COURSE OUTLINE

T – Theory, SL – Skill Lab

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	20 (T) 20 (SL)	Describe the purpose and process of health assessment and perform assessment under supervised clinical practice	Health Assessment • Interview techniques • Observation techniques • Purposes of health assessment • Process of Health assessment ○ Health history ○ Physical examination ▪ Methods: Inspection, Palpation, Percussion, Auscultation, Olfaction ▪ Preparation for examination: patient and unit ▪ General assessment ▪ Assessment of each body system ▪ Documenting health assessment findings	• Modular Learning • *Health Assessment Module • Lecture cum Discussion • Demonstration	• Essay • Short answer • Objective type • OSCE
II	13 (T) 8 (SL)	Describe assessment, planning, implementation and evaluation of nursing care using Nursing process	The Nursing Process • Critical Thinking Competencies, Attitudes for Critical Thinking, Levels of critical thinking in Nursing • Nursing Process Overview	• Lecture • Discussion • Demonstration • Supervised Clinical Practice	• Essay • Short answer • Objective type • Evaluation of care plan

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		approach	○ Assessment ▪ Collection of Data: Types, Sources, Methods ▪ Organizing Data ▪ Validating Data ▪ Documenting Data ○ Nursing Diagnosis ▪ Identification of client problems, risks and strengths ▪ Nursing diagnosis statement – parts, Types, Formulating, Guidelines for formulating Nursing Diagnosis ▪ NANDA approved diagnoses ▪ Difference between medical and nursing diagnosis ○ Planning ▪ Types of planning ▪ Establishing Priorities ▪ Establishing Goals and Expected Outcomes – Purposes, types, guidelines, Components of goals and outcome statements ▪ Types of Nursing Interventions, Selecting interventions: Protocols and Standing Orders ▪ Introduction to Nursing Intervention Classification and Nursing Outcome Classification ▪ Guidelines for writing care plan ○ Implementation ▪ Process of Implementing the plan of care ▪ Types of care – Direct and Indirect ○ Evaluation ▪ Evaluation Process, Documentation and Reporting		
III	5 (T) 5 (SL)	Identify and meet the Nutritional needs of patients	Nutritional needs • Importance • Factors affecting nutritional needs • Assessment of nutritional status • <i>Review</i>: special diets – Solid, Liquid, Soft • <i>Review</i> on therapeutic diets • Care of patient with Dysphagia,	• Lecture • Discussion • Demonstration • Exercise • Supervised Clinical practice	• Essay • Short answer • Objective type • Evaluation of nutritional assessment & diet planning

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			Anorexia, Nausea, Vomiting - Meeting Nutritional needs: Principles, equipment, procedure, indications - Oral - Enteral: Nasogastric/ Orogastric - Introduction to other enteral feeds – types, indications, Gastrostomy, Jejunostomy - Parenteral – TPN (Total Parenteral Nutrition)		
IV	5 (T) 15 (SL)	Identify and meet the hygienic needs of patients	Hygiene - Factors Influencing Hygienic Practice - Hygienic care: Indications and purposes, effects of neglected care - Care of the Skin – (Bath, feet and nail, Hair Care) - Care of pressure points - Assessment of Pressure Ulcers using Braden Scale and Norton Scale - Pressure ulcers – causes, stages and manifestations, care and prevention - Perineal care/Meatal care - Oral care, Care of Eyes, Ears and Nose including assistive devices (eye glasses, contact lens, dentures, hearing aid)	- Lecture - Discussion - Demonstration	- Essay - Short answer - Objective type - OSCE
V	10 (T) 10 (SL)	Identify and meet the elimination needs of patient	Elimination needs - Urinary Elimination - Review of Physiology of Urine Elimination, Composition and characteristics of urine - Factors Influencing Urination - Alteration in Urinary Elimination - Facilitating urine elimination: assessment, types, equipment, procedures and special considerations - Providing urinal/bed pan - Care of patients with - Condom drainage - Intermittent Catheterization - Indwelling Urinary catheter and urinary drainage - Urinary diversions - Bladder irrigation	- Lecture - Discussion - Demonstration	- Essay - Short answer - Objective type - OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Bowel Elimination - Review of Physiology of Bowel Elimination, Composition and characteristics of feces - Factors affecting Bowel elimination - Alteration in Bowel Elimination - Facilitating bowel elimination: Assessment, equipment, procedures - Enemas - Suppository - Bowel wash - Digital Evacuation of impacted feces - Care of patients with Ostomies (Bowel Diversion Procedures)		
VI	3 (T) 4 (SL)	Explain various types of specimens and identify normal values of tests Develop skill in specimen collection, handling and transport	Diagnostic testing - Phases of diagnostic testing (pre-test, intra-test & post-test) in Common investigations and clinical implications - Complete Blood Count - Serum Electrolytes - LFT - Lipid/Lipoprotein profile - Serum Glucose – AC, PC, HbA1c - Monitoring Capillary Blood Glucose (Glucometer Random Blood Sugar – GRBS) - Stool Routine Examination - Urine Testing – Albumin, Acetone, pH, Specific Gravity - Urine Culture, Routine, Timed Urine Specimen - Sputum culture - Overview of Radiologic & Endoscopic Procedures	- Lecture - Discussion - Demonstration	- Essay - Short answer - Objective type
VII	11 (T) 10 (SL)	Assess patients for oxygenation needs, promote oxygenation and provide care during oxygen therapy	Oxygenation needs - Review of Cardiovascular and Respiratory Physiology - Factors affecting respiratory functioning - Alterations in Respiratory Functioning - Conditions affecting - Airway - Movement of air	- Lecture - Discussion - Demonstration & Re-demonstration	- Essay - Short answer - Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			○ Diffusion ○ Oxygen transport • Alterations in oxygenation • Nursing interventions to promote oxygenation: assessment, types, equipment used & procedure ○ Maintenance of patent airway ○ Oxygen administration ○ Suctioning – oral, tracheal ○ Chest physiotherapy – Percussion, Vibration & Postural drainage ○ Care of Chest drainage – principles & purposes ○ Pulse Oximetry – Factors affecting measurement of oxygen saturation using pulse oximeter, Interpretation • Restorative & continuing care ○ Hydration ○ Humidification ○ Coughing techniques ○ Breathing exercises ○ Incentive spirometry		
VIII	5 (T) 10 (SL)	Describe the concept of fluid, electrolyte balance	Fluid, Electrolyte, and Acid – Base Balances • Review of Physiological Regulation of Fluid, Electrolyte and Acid-Base Balances • Factors Affecting Fluid, Electrolyte and Acid-Base Balances • Disturbances in fluid volume: ○ Deficit ▪ Hypovolemia ▪ Dehydration ○ Excess ▪ Fluid overload ▪ Edema • Electrolyte imbalances (hypo and hyper) ○ Acid-base imbalances ▪ Metabolic – acidosis & alkalosis ▪ Respiratory – acidosis & alkalosis ○ Intravenous therapy	• Lecture • Discussion • Demonstration	• Essay • Short answer • Objective type • Problem solving – calculations

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Peripheral venipuncture sites - Types of IV fluids - Calculation for making IV fluid plan - Complications of IV fluid therapy - Measuring fluid intake and output - Administering Blood and Blood components - Restricting fluid intake - Enhancing Fluid intake		
IX	20 (T) 22 (SL)	Explain the principles, routes, effects of administration of medications Calculate conversions of drugs and dosages within and between systems of measurements Administer oral and topical medication and document accurately under supervision	Administration of Medications - Introduction – Definition of Medication, Administration of Medication, Drug Nomenclature, Effects of Drugs, Forms of Medications, Purposes, Pharmacodynamics and Pharmacokinetics - Factors influencing Medication Action - Medication orders and Prescriptions - Systems of measurement - Medication dose calculation - Principles, 10 rights of Medication Administration - Errors in Medication administration - Routes of administration - Storage and maintenance of drugs and Nurses responsibility - Terminologies and abbreviations used in prescriptions and medications orders - Developmental considerations - Oral, Sublingual and Buccal routes: Equipment, procedure - Introduction to Parenteral Administration of Drugs – Intramuscular, Intravenous, Subcutaneous, Intradermal: Location of site, Advantages and disadvantages of the specific sites, Indication and contraindications for the different routes and sites. - Equipment – Syringes & needles, cannulas, Infusion sets – parts, types, sizes - Types of vials and ampoules, Preparing Injectable medicines from vials and ampoules - Care of equipment: decontamination and disposal of syringes, needles.	- Lecture - Discussion - Demonstration & Re-demonstration	- Essay - Short answer - Objective type - OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			infusion sets o Prevention of Needle-Stick Injuries • Topical Administration: Types, purposes, site, equipment, procedure o Application to skin & mucous membrane o Direct application of liquids, Gargle and swabbing the throat o Insertion of Drug into body cavity: Suppository/ medicated packing in rectum/vagina o Instillations: Ear, Eye, Nasal, Bladder, and Rectal o Irrigations: Eye, Ear, Bladder, Vaginal and Rectal o Spraying: Nose and throat • Inhalation: Nasal, oral, endotracheal/tracheal (steam, oxygen and medications) – purposes, types, equipment, procedure, recording and reporting of medications administered • Other Parenteral Routes: Meaning of epidural, intrathecal, intraosseous, intraperitoneal, intra-pleural, intra-arterial		
X	5 (T) 6 (SL)	Provide care to patients with altered functioning of sense organs and unconsciousness in supervised clinical practice	Sensory needs • Introduction • Components of sensory experience – Reception, Perception & Reaction • Arousal Mechanism • Factors affecting sensory function • Assessment of Sensory alterations – sensory deficit, deprivation, overload & sensory poverty • Management o Promoting meaningful communication (patients with Aphasia, artificial airway & Visual and Hearing impairment) Care of Unconscious Patients • Unconsciousness: Definition, causes & risk factors, pathophysiology, stages of Unconsciousness, Clinical Manifestations • Assessment and nursing management of patient with unconsciousness, complications	• Lecture • Discussion • Demonstration	• Essay • Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
XI	4 (T) 6 (SL)	Explain loss, death and grief	Care of Terminally ill, death and dying • Loss – Types • Grief, Bereavement & Mourning • Types of Grief responses • Manifestations of Grief • Factors influencing Loss & Grief Responses • Theories of Grief & Loss – Kubler Ross • 5 Stages of Dying • The R Process model (Rando's) • Death – Definition, Meaning, Types (Brain & Circulatory Deaths) • Signs of Impending Death • Dying patient's Bill of Rights • Care of Dying Patient • Physiological changes occurring after Death • Death Declaration, Certification • Autopsy • Embalming • Last office/Death Care • Counseling & supporting grieving relatives • Placing body in the Mortuary • Releasing body from Mortuary • Overview – Medico-legal Cases, Advance directives, DNI/DNR, Organ Donation, Euthanasia	• Lecture • Discussion • Case discussions • Death care/last office	• Essay • Short answer • Objective type
			PSYCHOSOCIAL NEEDS (A-D)		
XII	3 (T)	Develop basic understanding of self-concept	A. Self-concept • Introduction • Components (Personal Identity, Body Image, Role Performance, Self Esteem) • Factors affecting Self Concept • Nursing Management	• Lecture • Discussion • Demonstration • Case Discussion/ Role play	• Essay • Short answer • Objective type
XIII	2 (T)	Describe sexual development and sexuality	B. Sexuality • Sexual development throughout life • Sexual health • Sexual orientation • Factors affecting sexuality	• Lecture • Discussion	• Essay • Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Prevention of STIs, unwanted pregnancy, avoiding sexual harassment and abuse - Dealing with inappropriate sexual behavior		
XIV	2 (T) 4 (SL)	Describe stress and adaptation	C. Stress and Adaptation – Introductory concepts - Introduction - Sources, Effects, Indicators & Types of Stress - Types of stressors - Stress Adaptation – General Adaptation Syndrome (GAS), Local Adaptation Syndrome (LAS) - Manifestation of stress – Physical & psychological - Coping strategies/ Mechanisms - Stress Management - Assist with coping and adaptation - Creating therapeutic environment - Recreational and diversion therapies	- Lecture - Discussion	- Essay - Short answer - Objective type
XV	6 (T)	Explain culture and cultural norms Integrate cultural differences and spiritual needs in providing care to patients under supervision	D. Concepts of Cultural Diversity and Spirituality - Cultural diversity - Cultural Concepts – Culture, Subculture, Multicultural, Diversity, Race, Acculturation, Assimilation - Transcultural Nursing - Cultural Competence - Providing Culturally Responsive Care - Spirituality - Concepts – Faith, Hope, Religion, Spirituality, Spiritual Wellbeing - Factors affecting Spirituality - Spiritual Problems in Acute, Chronic, Terminal illnesses & Near-Death Experience - Dealing with Spiritual Distress/Problems	- Lecture - Discussion	- Essay - Short answer - Objective type
XVI	6 (T)	Explain the significance of nursing theories	Nursing Theories: Introduction - Meaning & Definition, Purposes, Types of theories with examples, Overview of selected nursing theories – Nightingale, Orem, Roy - Use of theories in nursing practice	- Lecture - Discussion	- Essay - Short answer - Objective type

CLINICAL PRACTICUM

Clinical: 4 Credits (320 hours)

PRACTICE COMPETENCIES: On completion of the course, the student will be able to

1. Perform health assessment of each body system
2. Develop skills in assessment, planning, implementation and evaluation of nursing care using Nursing process approach
3. Identify and meet the Nutritional needs of patients
4. Implement basic nursing techniques in meeting hygienic needs of patients
5. Plan and Implement care to meet the elimination needs of patient
6. Develop skills in instructing and collecting samples for investigation
7. Perform simple lab tests and analyze & interpret common diagnostic values
8. Identify patients with impaired oxygenation and demonstrate skill in caring for patients with impaired oxygenation
9. Identify and demonstrate skill in caring for patients with fluid, electrolyte and acid – base imbalances
10. Assess, plan, implement & evaluate the basic care needs of patients with altered functioning of sense organs and unconsciousness
11. Care for terminally ill and dying patients

SKILL LAB**Use of Mannequins and Simulators**

S.No.	Competencies	Mode of Teaching
1.	Health Assessment	Standardized Patient
2.	Nutritional Assessment	Standardized Patient
3.	Sponge bath, oral hygiene, perineal care	Mannequin
4.	Nasogastric tube feeding	Trainer/ Simulator
5.	Providing bed pan & urinal	Mannequin
6.	Catheter care	Catheterization Trainer
7.	Bowel wash, enema, insertion of suppository	Simulator/ Mannequin
8.	Oxygen administration – face mask, venture mask, nasal prongs	Mannequin
9.	Administration of medication through Parenteral route – IM, SC, ID, IV	IM injection trainer, ID injection trainer, IV arm (Trainer)
10.	Last Office	Mannequin

CLINICAL POSTINGS – General Medical/Surgical Wards

(16 weeks × 20 hours per week = 320 hours)

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
General Medical/ Surgical wards	3	Perform health assessment of each body system	Health Assessment • Nursing/Health history taking • Perform physical examination: ○ General	• History Taking – 2 • Physical examination – 2	• Assessment of clinical skills using checklist • OSCE

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
			- Body systems - Use various methods of physical examination – Inspection, Palpation, Percussion, Auscultation, Olfaction - Identification of system wise deviations - Documentation of findings		
	1	Develop skills in assessment, planning, implementation and evaluation of nursing care using Nursing process approach	The Nursing Process Prepare Nursing care plan for the patient based on the given case scenario	Nursing process – 1	Evaluation of Nursing process with criteria
	2	Identify and meet the Nutritional needs of patients Implement basic nursing techniques in meeting hygienic needs of patients	Nutritional needs, Elimination needs & Diagnostic testing <i>Nutritional needs</i> - Nutritional Assessment - Preparation of Nasogastric tube feed - Nasogastric tube feeding <i>Hygiene</i> - Care of Skin & Hair: - Sponge Bath/ Bed bath - Care of pressure points & back massage - Pressure sore risk assessment using Braden/Norton scale - Hair wash - Pediculosis treatment - Oral Hygiene - Perineal Hygiene - Catheter care	- Nutritional Assessment and Clinical Presentation – 1 - Pressure sore assessment – 1	- Assessment of clinical skills using checklist - OSCE
	2	Plan and Implement care to meet the elimination needs of patient Develop skills in instructing and collecting samples for investigation.	Elimination needs - Providing - Urinal - Bedpan - Insertion of Suppository - Enema - Urinary Catheter care - Care of urinary drainage Diagnostic testing	- Clinical Presentation on Care of patient with Constipation – 1 - Lab values – interpretation	- Assessment of clinical skills using checklist - OSCE

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Perform simple lab tests and analyze & interpret common diagnostic values	- Specimen Collection - Urine routine and culture - Stool routine - Sputum Culture - Perform simple Lab Tests using reagent strips - Urine – Glucose, Albumin, Acetone, pH, Specific gravity - Blood – GRBS Monitoring		
	3	Identify patients with impaired oxygenation and demonstrate skill in caring for patients with impaired oxygenation Identify and demonstrate skill in caring for patients with fluid, electrolyte and acid – base imbalances	Oxygenation needs, Fluid, Electrolyte, and Acid – Base Balances <i>Oxygenation needs</i> - Oxygen administration methods - Nasal Prongs - Face Mask/Venturi Mask - Steam inhalation - Chest Physiotherapy - Deep Breathing & Coughing Exercises - Oral Suctioning <i>Fluid, Electrolyte, and Acid – Base Balances</i> - Maintaining intake output chart - Identify & report complications of IV therapy - Observe Blood & Blood Component therapy - Identify & Report Complications of Blood & Blood Component therapy		- Assessment of clinical skills using checklist - OSCE - Assessment of clinical skills using checklist - OSCE
	3	Explain the principles, routes, effects of administration of medications Calculate conversions of drugs and dosages within and between systems of Measurements Administer drugs by the following routes- Oral, Intradermal,	Administration of Medications - Calculate Drug Dosages - Preparation of lotions & solutions - Administer Medications - Oral - Topical - Inhalations - Parenteral - Intradermal - Subcutaneous		- Assessment of clinical skills using checklist - OSCE

Clinical Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills (Supervised Clinical Practice)	Clinical Requirements	Assessment Methods
		Subcutaneous, Intramuscular, Intra Venous Topical, inhalation	▪ -Intramuscular ▪ Instillations ○ Eye, Ear, Nose –instillation of medicated drops, nasal sprays, irrigations		
	2	Assess, plan, implement & evaluate the basic care needs of patients with altered functioning of sense organs and unconsciousness Care for terminally ill and dying patients	Sensory Needs and Care of Unconscious patients, Care of Terminally ill, death and dying <i>Sensory Needs and Care of Unconscious patients</i> • Assessment of Level of Consciousness using Glasgow Coma Scale <i>Terminally ill, death and dying</i> • Death Care	• Nursing rounds on care of patient with altered sensorium	• Assessment of clinical skills using checklist • OSCE • Assessment of clinical skills using checklist

HEALTH/NURSING INFORMATICS AND TECHNOLOGY

PLACEMENT: II SEMESTER

THEORY: 2 Credits (40 hours)

PRACTICAL/LAB: 1 Credit (40 hours)

DESCRIPTION: This course is designed to equip novice nursing students with knowledge and skills necessary to deliver efficient informatics-led health care services.

COMPETENCIES: On completion of the course, the students will be able to

1. Develop a basic understanding of computer application in patient care and nursing practice.
2. Apply the knowledge of computer and information technology in patient care and nursing education, practice, administration and research.
3. Describe the principles of health informatics and its use in developing efficient healthcare.
4. Demonstrate the use of information system in healthcare for patient care and utilization of nursing data.
5. Demonstrate the knowledge of using Electronic Health Records (EHR) system in clinical practice.
6. Apply the knowledge of interoperability standards in clinical setting.
7. Apply the knowledge of information and communication technology in public health promotion.
8. Utilize the functionalities of Nursing Information System (NIS) system in nursing.
9. Demonstrate the skills of using data in management of health care.
10. Apply the knowledge of the principles of digital ethical and legal issues in clinical practice.
11. Utilize evidence-based practices in informatics and technology for providing quality patient care.
12. Update and utilize evidence-based practices in nursing education, administration, and practice.

COURSE OUTLINE

T – Theory, P/L – Lab

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P/L				
I	10	15	Describe the importance of computer and technology in patient care and nursing practice	Introduction to computer applications for patient care delivery system and nursing practice • Use of computers in teaching, learning, research and nursing practice	• Lecture • Discussion • Practice session • Supervised clinical practice on EHR use • Participate in data analysis using statistical package with statistician	(T) • Short answer • Objective type • Visit reports • Assessment of assignments
			Demonstrate the use of computer and technology in patient care, nursing education, practice, administration and research	• Windows, MS office: Word, Excel, Power Point • Internet • Literature search • Statistical packages • Hospital management information system	• Visit to hospitals with different hospital management systems	(P) • Assessment of skills using checklist
II	4	5	Describe the principles of health informatics Explain the ways data, knowledge and information can be used for effective healthcare	Principles of Health Informatics • Health informatics – needs, objectives and limitations • Use of data, information and knowledge for more effective healthcare and better health	• Lecture • Discussion • Practical session • Work in groups with health informatics team in a hospital to extract nursing data and prepare a report	(T) • Essay • Short answer • Objective type questions • Assessment of report
III	3	5	Describe the concepts of information system in health Demonstrate the use of health information system in hospital setting	Information Systems in Healthcare • Introduction to the role and architecture of information systems in modern healthcare environments • Clinical Information System (CIS)/Hospital information System (HIS)	• Lecture • Discussion • Demonstration • Practical session • Work in groups with nurse leaders to understand the hospital information system	(T) • Essay • Short answer • Objective type
IV	4	4	Explain the use of electronic health records in nursing practice Describe the latest trend in electronic health records standards and interoperability	Shared Care & Electronic Health Records • Challenges of capturing rich patient histories in a computable form • Latest global developments and standards to enable lifelong electronic health records to be integrated from disparate systems.	• Lecture • Discussion • Practice on Simulated EHR system • Practical session • Visit to health informatics department of a hospital to understand the use of EHR in nursing practice	(T) • Essay • Short answer • Objective type (P) • Assessment of skills using checklist

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P/L				
					• Prepare a report on current EHR standards in Indian setting	
V	3		Describe the advantages and limitations of health informatics in maintaining patient safety and risk management	Patient Safety & Clinical Risk • Relationship between patient safety and informatics • Function and application of the risk management process	• Lecture • Discussion	(T) • Essay • Short answer • Objective type
VI	3	6	Explain the importance of knowledge management Describe the standardized languages used in health informatics	Clinical Knowledge & Decision Making • Role of knowledge management in improving decision-making in both the clinical and policy contexts • Systematized Nomenclature of Medicine, Clinical Terms, SNOMED CT to ICD-10-CM Map, standardized nursing terminologies (NANDA, NOC), Omaha system.	• Lecture • Discussion • Demonstration • Practical session • Work in groups to prepare a report on standardized languages used in health informatics. • Visit health informatics department to understand the standardized languages used in hospital setting	(T) • Essay • Short answer • Objective type
VII	3		Explain the use of information and communication technology in patient care Explain the application of public health informatics	eHealth: Patients and the Internet • Use of information and communication technology to improve or enable personal and public healthcare • Introduction to public health informatics and role of nurses	• Lecture • Discussion • Demonstration	• Essay • Short answer • Objective type • Practical exam
VIII	3	5	Describe the functions of nursing information system Explain the use of healthcare data in management of health care organization	Using Information in Healthcare Management • Components of Nursing Information system(NIS) • Evaluation, analysis and presentation of healthcare data to inform decisions in the management of health-care organizations	• Lecture • Discussion • Demonstration on simulated NIS software • Visit to health informatics department of the hospital to understand use of healthcare data in decision making	(T) • Essay • Short answer • Objective type
IX	4		Describe the ethical and legal issues in healthcare informatics Explains the ethical and legal issues	Information Law & Governance in Clinical Practice • Ethical-legal issues pertaining to healthcare information in contemporary clinical practice • Ethical-legal issues related to	• Lecture • Discussion • Case discussion • Role play	(T) • Essay • Short answer • Objective type

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P/L				
			related to nursing informatics	digital health applied to nursing		
X	3		Explain the relevance of evidence-based practices in providing quality healthcare	Healthcare Quality & Evidence Based Practice Use of scientific evidence in improving the quality of healthcare and technical and professional informatics standards	- Lecture - Discussion - Case study	(T) - Essay - Short answer - Objective type

SKILLS

- Utilize computer in improving various aspects of nursing practice.
- Use technology in patient care and professional advancement.
- Use data in professional development and efficient patient care.
- Use information system in providing quality patient care.
- Use the information system to extract nursing data.
- Develop skill in conducting literature review.

APPLIED MICROBIOLOGY AND INFECTION CONTROL INCLUDING SAFETY

PLACEMENT: III SEMESTER

THEORY: 2 Credits (40 hours)

PRACTICAL: 1 Credit (40 hours) (Lab/Experiential Learning – L/E)

SECTION A: APPLIED MICROBIOLOGY

THEORY: 20 hours

PRACTICAL: 20 hours (Lab/Experiential Learning – L/E)

DESCRIPTION: This course is designed to enable students to acquire understanding of fundamentals of Microbiology, compare and contrast different microbes and comprehend the means of transmission and control of spread by various microorganisms. It also provides opportunities for practicing infection control measures in hospital and community settings.

COMPETENCIES: On completion of the course, the students will be able to:

- Identify the ubiquity and diversity of microorganisms in the human body and the environment.
- Classify and explain the morphology and growth of microbes.
- Identify various types of microorganisms.
- Explore mechanisms by which microorganisms cause disease.
- Develop understanding of how the human immune system counteracts infection by specific and non-specific mechanisms.
- Apply the principles of preparation and use of vaccines in immunization.
- Identify the contribution of the microbiologist and the microbiology laboratory to the diagnosis of infection.

COURSE OUTLINE

T – Theory, L/E – Lab/Experiential Learning

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
I	3		Explain concepts and principles of microbiology and its importance in nursing	Introduction: • Importance and relevance to nursing • Historical perspective • Concepts and terminology • Principles of microbiology	• Lecture cum Discussion	• Short answer • Objective type
II	10	10 (L/E)	Describe structure, classification morphology and growth of bacteria Identify Microorganisms	General characteristics of Microbes: • Structure and classification of Microbes • Morphological types • Size and form of bacteria • Motility • Colonization • Growth and nutrition of microbes • Temperature • Moisture • Blood and body fluids • Laboratory methods for Identification of Microorganisms • Types of Staining – simple, differential (Gram's, AFB), special – capsular staining (negative), spore, LPCB, KOH mount. • Culture and media preparation – solid and liquid. Types of media – semi synthetic, synthetic, enriched, enrichment, selective and differential media. Pure culture techniques – tube dilution, pour, spread, streak plate. Anaerobic cultivation of bacteria	• Lecture cum Discussion • Demonstration • Experiential Learning through visual	• Short answer • Objective type
III	4	6 (L/E)	Describe the different disease producing organisms	Pathogenic organisms • Micro-organisms: Cocci – gram positive and gram negative, Bacilli – gram positive and gram negative • Viruses • Fungi: Superficial and Deep mycoses • Parasites • Rodents & Vectors ○ Characteristics, Source, portal of entry, transmission of infection, Identification of disease producing micro-organisms	• Lecture cum Discussion • Demonstration • Experiential learning through visual	• Short answer • Objective type
IV	3	4 (L/E)	Explain the concepts of	Immunity	• Lecture	• Short answer • Objective

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			immunity, hyper sensitivity and immunization	• Immunity: Types, classification • Antigen and antibody reaction • Hypersensitivity reactions • Serological tests • Immunoglobulins: Structure, types & properties • Vaccines: Types & classification, storage and handling, cold chain, Immunization for various diseases • Immunization Schedule	• Discussion • Demonstration • Visit to observe vaccine storage • Clinical practice	type • Visit report

SECTION B: INFECTION CONTROL & SAFETY

THEORY: 20 hours

PRACTICAL/LAB: 20 hours (Lab/Experiential Learning – L/E)

DESCRIPTION: This course is designed to help students to acquire knowledge and develop competencies required for fundamental patient safety and infection control in delivering patient care. It also focuses on identifying patient safety indicators, preventing and managing hospital acquired infections, and in following universal precautions.

COMPETENCIES: The students will be able to:

1. Develop knowledge and understanding of Hospital acquired Infections (HAI) and effective practices for prevention.
2. Integrate the knowledge of isolation (Barrier and reverse barrier) techniques in implementing various precautions.
3. Demonstrate and practice steps in Hand washing and appropriate use of different types of PPE.
4. Illustrate various disinfection and sterilization methods and techniques.
5. Demonstrate knowledge and skill in specimen collection, handling and transport to optimize the diagnosis for treatment.
6. Incorporate the principles and guidelines of Bio Medical waste management.
7. Apply the principles of Antibiotic stewardship in performing the nurses' role.
8. Identify patient safety indicators and perform the role of nurse in the patient safety audit process.
9. Apply the knowledge of International Patient Safety Goals (IPSG) in the patient care settings.
10. Identify employee safety indicators and risk of occupational hazards.
11. Develop understanding of the various safety protocols and adhere to those protocols.

COURSE OUTLINE

T – Theory, L/E – Lab/Experiential Learning

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
I	2	2 (E)	Summarize the evidence based and effective patient care practices for the prevention of common healthcare associated infections in the healthcare	HAI (Hospital acquired Infection) • Hospital acquired infection • Bundle approach - Prevention of Urinary Tract Infection (UTI) - Prevention of Surgical Site Infection (SSI) - Prevention of Ventilator	• Lecture & Discussion • Experiential learning	• Knowledge assessment • MCQ • Short answer

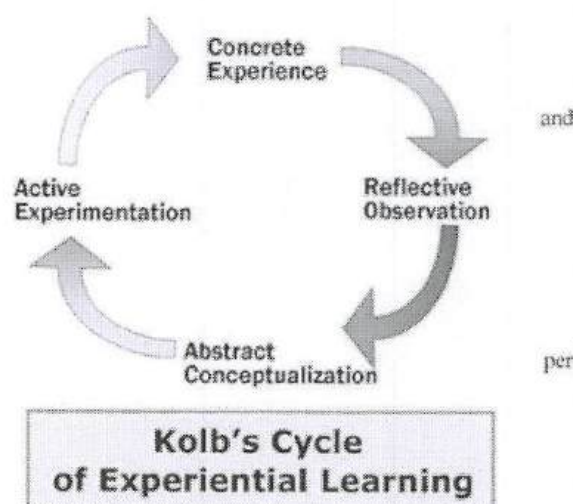
Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			setting	Associated events (VAE) - Prevention of Central Line Associated Blood Stream Infection (CLABSI) • Surveillance of HAI – Infection control team & Infection control committee		
II	3	4 (L)	Demonstrate appropriate use of different types of PPEs and the critical use of risk assessment	Isolation Precautions and use of Personal Protective Equipment (PPE) • Types of isolation system, standard precaution and transmission-based precautions (Direct Contact, Droplet, Indirect) • Epidemiology & Infection prevention – CDC guidelines • Effective use of PPE	• Lecture • Demonstration & Re-demonstration	• Performance assessment • OSCE
III	1	2 (L)	Demonstrate the hand hygiene practice and its effectiveness on infection control	Hand Hygiene • Types of Hand hygiene. • Hand washing and use of alcohol hand rub • Moments of Hand Hygiene • WHO hand hygiene promotion	• Lecture • Demonstration & Re-demonstration	• Performance assessment
IV	1	2 (E)	Illustrates disinfection and sterilization in the healthcare setting	Disinfection and sterilization • Definitions • Types of disinfection and sterilization • Environment cleaning • Equipment Cleaning • Guides on use of disinfectants • Spaulding's principle	• Lecture • Discussion • Experiential learning through visit	• Short answer • Objective type
V	1		Illustrate on what, when, how, why specimens are collected to optimize the diagnosis for treatment and management.	Specimen Collection (Review) • Principle of specimen collection • Types of specimens • Collection techniques and special considerations • Appropriate containers • Transportation of the sample • Staff precautions in handling specimens	• Discussion	• Knowledge evaluation • Quiz • Performance assessment • Checklist
VI	2	2 (E)	Explain on Bio Medical waste management & laundry management	BMW (Bio Medical Waste Management) <i>Laundry management process and infection control and prevention</i>	• Discussion • Demonstration • Experiential learning through	• Knowledge assessment by short answers, objective type • Performance

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
					• Role play • Inquiry Based Learning	• Objective type
IX	1		Enumerate IPSG and application of the goals in the patient care settings.	IPSG (International Patient safety Goals) • Identify patient correctly • Improve effective communication • Improve safety of High Alert medication • Ensure safe surgery • Reduce the risk of health care associated infection • Reduce the risk of patient harm resulting from falls • Reduce the harm associated with clinical alarm system	• Lecture • Role play	• Objective type
X	2	3 (L/E)	Enumerate the various safety protocols and its applications	Safety protocol • 5S (Sort, Set in order, Shine, Standardize, Sustain) • Radiation safety • Laser safety • Fire safety - Types and classification of fire - Fire alarms - Firefighting equipment • HAZMAT (Hazardous Materials) safety - Types of spill - Spillage management - MSDS (Material Safety Data Sheets) • Environmental safety - Risk assessment - Aspect impact analysis - Maintenance of Temp and Humidity (Department wise) - Audits • Emergency Codes • Role of Nurse in times of disaster	• Lecture • Demonstration/ Experiential learning	• Mock drills • Post tests • Checklist
XI	2		Explain importance of employee safety	Employee Safety Indicators • Vaccination • Needle stick injuries (NSI)	• Lecture • Discussion	• Knowledge assessment by short answers,

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			indicators Identify risk of occupational hazards, prevention and post exposure prophylaxis.	prevention • Fall prevention • Radiation safety • Annual health check Healthcare Worker Immunization Program and management of occupational exposure • Occupational health ordinance • Vaccination program for healthcare staff • Needle stick injuries and prevention and post exposure prophylaxis	• Lecture method • Journal review	objective type • Short answer

*Experiential Learning:

Experiential learning is the process by which knowledge is created through the process of experience in the clinical field. Knowledge results from the combination of grasping transforming experience. (Kolb, 1984). The experiential learning cycle begins with an experience that the student has had, followed by an opportunity to reflect on that experience. Then students may conceptualize and draw conclusions about what they experienced and observed, leading to future actions in which the students experiment with different behaviors. This begins the new cycle as the students have new experiences based on their experimentation. These steps may occur in nearly and order as the learning progresses. As the need of the learner, the concrete components and conceptual components can be in different order as they may require a variety of cognitive and affective behaviors.



PHARMACOLOGY - I

PLACEMENT: III SEMESTER

THEORY: 1 Credit (20 hours)

DESCRIPTION: This course is designed to enable students to acquire understanding of Pharmacodynamics, Pharmacokinetics, principles of therapeutics and nursing implications.

COMPETENCIES: On completion of the course, the students will be able to

1. Describe pharmacodynamics and pharmacokinetics.
2. Review the principles of drug calculation and administration.
3. Explain the commonly used antiseptics and disinfectants.
4. Describe the pharmacology of drugs acting on the GI system.
5. Describe the pharmacology of drugs acting on the respiratory system.
6. Describe drugs used in the treatment of cardiovascular and blood disorders.
7. Explain the drugs used in the treatment of endocrine system disorders.
8. Describe the drugs acting on skin and drugs used to treat communicable diseases.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
I	3 (T)	Describe Pharmacodynamics, Pharmacokinetics, Classification, principles of administration of drugs	Introduction to Pharmacology • Definitions & Branches • Nature & Sources of drugs • Dosage Forms and Routes of drug administration • Terminology used • Classification, Abbreviations, Prescription, Drug Calculation, Weights and Measures • <i>Pharmacodynamics</i>: Actions, Drug Antagonism, Synergism, Tolerance, Receptors, Therapeutic, adverse, toxic effects, pharmacovigilance • <i>Pharmacokinetics</i>: Absorption, Bioavailability, Distribution, Metabolism, Interaction, Excretion • Review: Principles of drug administration and treatment individualization ◦ Factors affecting dose, route etc. • Indian Pharmacopoeia: Legal Issues, Drug Laws, Schedule Drugs • Rational Use of Drugs • Principles of Therapeutics	• Lecture cum Discussion • Guided reading and written assignment on schedule K drugs	• Short answer • Objective type • Assessment of assignments
II	1 (T)	Describe antiseptics, and disinfectant & nurse's responsibilities	Pharmacology of commonly used antiseptics and disinfectants • Antiseptics and Disinfectants • Composition, action, dosage, route, indications, contraindications, Drug interactions, side effects, adverse effects, toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
III	2 (T)	Describe drugs acting on gastro-intestinal system & nurse's responsibilities	Drugs acting on G.I. system • Pharmacology of commonly used drugs ◦ Emetics and Antiemetics ◦ Laxatives and Purgatives ◦ Antacids and antipeptic ulcer drugs ◦ Anti-diarrhoeals – Fluid and electrolyte therapy, Furazolidone, dicyclomine • Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
IV	2 (T)	Describe drugs acting on respiratory system & nurse's responsibilities	Drugs acting on respiratory system • Pharmacology of commonly used ○ Antiasthmatics – Bronchodilators (Salbutamol inhalers) ○ Decongestants ○ Expectorants, Antitussives and Mucolytics ○ Broncho-constrictors and Antihistamines • Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
V	4 (T)	Describe drugs used on cardio-vascular system & nurse's responsibilities	Drugs used in treatment of Cardiovascular system and blood disorders • Haematinics, & treatment of anemia and antiadrenergics • Cholinergic and anticholinergic • Adrenergic Drugs for CHF & vasodilators • Antianginals • Antiarrhythmics • Antihypertensives • Coagulants & Anticoagulants • Antiplatelets & thrombolytics • Hypolipidemics • Plasma expanders & treatment of shock • Drugs used to treat blood disorders • Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
VI	2 (T)	Describe the drugs used in treatment of endocrine system disorders	Drugs used in treatment of endocrine system disorders • Insulin & oral hypoglycemics • Thyroid and anti-thyroid drugs • Steroids ○ Corticosteroids ○ Anabolic steroids • Calcitonin, parathormone, vitamin D₃, calcium metabolism ○ Calcium salts	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
VII	1 (T)	Describe drugs used in skin diseases & nurse's responsibilities	Drugs used in treatment of integumentary system • Antihistaminics and antipruritics • Topical applications for skin- Benzylbenzoate, Gamma BHC, Clotrimazole, Miconazole, Silver Sulphadiazine (burns) • Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
VIII	5 (T)	Explain drug therapy/ chemotherapy of specific infections & infestations & nurse's responsibilities	Drugs used in treatment of communicable diseases (common infections, infestations) • General Principles for use of Antimicrobials • Pharmacology of commonly used drugs. ◦ Penicillin, Cephalosporin's, Aminoglycosides, Macrolide & broad spectrum antibiotics, Sulfonamides, quinolones, Misc. antimicrobials • Anaerobic infections • Antitubercular drugs, • Antileprosy drugs • Antimalarials • Antiretroviral drugs • Antiviral agents • Anthelmintics, Antiscabies agents • Antifungal agents • Composition, action, dosage, route, indications, contraindications, Drug interactions, side effects, adverse effects, toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type

PATHOLOGY - I

PLACEMENT: III SEMESTER

THEORY: 1 Credit (20 hours) (includes lab hours also)

DESCRIPTION: This course is designed to enable students to acquire knowledge of pathology of various disease conditions, understanding of genetics, its role in causation and management of defects and diseases and to apply this knowledge in practice of nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Apply the knowledge of pathology in understanding the deviations from normal to abnormal pathology.
2. Rationalize the various laboratory investigations in diagnosing pathological disorders.
3. Demonstrate the understanding of the methods of collection of blood, body cavity fluids, urine and feces for various tests.

4. Apply the knowledge of genetics in understanding the various pathological disorders.
5. Appreciate the various manifestations in patients with diagnosed genetic abnormalities.
6. Rationalize the specific diagnostic tests in the detection of genetic abnormalities.
7. Demonstrate the understanding of various services related to genetics.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	8 (T)	Define the common terms used in pathology Identify the deviations from normal to abnormal structure and functions of body system	Introduction • Importance of the study of pathology • Definition of terms in pathology • Cell injury: Etiology, pathogenesis of reversible and irreversible cell injury, Necrosis, Gangrene • Cellular adaptations: Atrophy, Hypertrophy, Hyperplasia, Metaplasia, Dysplasia, Apoptosis • Inflammation: ◦ Acute inflammation (Vascular and Cellular events, systemic effects of acute inflammation) ◦ Chronic inflammation (Granulomatous inflammation, systemic effects of chronic inflammation) • Wound healing • Neoplasia: Nomenclature, Normal and Cancer cell, Benign and malignant tumors, Carcinoma in situ, Tumor metastasis: general mechanism, routes of spread and examples of each route • Circulatory disturbances: Thrombosis, embolism, shock • Disturbance of body fluids and electrolytes: Edema, Transudates and Exudates	• Lecture • Discussion • Explain using slides • Explain with clinical scenarios	• Short answer • Objective type
II	5 (T)	Explain pathological changes in disease conditions of various systems	Special Pathology Pathological changes in disease conditions of selected systems: 1. Respiratory system • Pulmonary infections: Pneumonia, Lung abscess, pulmonary tuberculosis • Chronic Obstructive Pulmonary Disease: Chronic bronchitis, Emphysema, Bronchial Asthma, Bronchiectasis • Tumors of Lungs 2. Cardio-vascular system • Atherosclerosis • Ischemia and Infarction. • Rheumatic Heart Disease	• Lecture • Discussion • Explain using slides, X-rays and scans • Visit to pathology lab, endoscopy unit and OT	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Infective endocarditis 3. Gastrointestinal tract • Peptic ulcer disease (Gastric and Duodenal ulcer) • Gastritis-H Pylori infection • Oral mucosa: Oral Leukoplakia, Squamous cell carcinoma • Esophageal cancer • Gastric cancer • Intestinal: Typhoid ulcer, Inflammatory Bowel Disease (Crohn's disease and Ulcerative colitis), Colorectal cancer 4. Liver, Gall Bladder and Pancreas • Liver: Hepatitis, Amoebic Liver abscess, Cirrhosis of Liver • Gall bladder: Cholecystitis. • Pancreas: Pancreatitis • Tumors of liver, Gall bladder and Pancreas 5. Skeletal system • Bone: Bone healing, Osteoporosis, Osteomyelitis, Tumors • Joints: Arthritis - Rheumatoid arthritis and Osteoarthritis 6. Endocrine system • Diabetes Mellitus • Goitre • Carcinoma thyroid		
III	7 (T)	Describe various laboratory tests in assessment and monitoring of disease conditions	Hematological tests for the diagnosis of blood disorders • Blood tests: Hemoglobin, White cell and platelet counts, PCV, ESR • Coagulation tests: Bleeding time (BT), Prothrombin time (PT), Activated Partial Prothrombin Time (APTT) • Blood chemistry • Blood bank: ◦ Blood grouping and cross matching ◦ Blood components ◦ Plasmapheresis ◦ Transfusion reactions Note: Few lab hours can be planned for observation and visits (Less than 1 credit, lab hours are not specified separately)	• Lecture • Discussion • Visit to clinical lab, biochemistry lab and blood bank	• Short answer • Objective type

ADULT HEALTH NURSING - I WITH INTEGRATED PATHOPHYSIOLOGY (including BCLS module)**PLACEMENT:** III SEMESTER**THEORY:** 7 Credits (140 hours)**PRACTICUM:** Lab/Skill Lab (SL) – 1 Credit (40 hours) Clinical – 6 Credits (480 hours)

DESCRIPTION: This course is designed to equip the students to review and apply their knowledge of Anatomy, Physiology, Biochemistry and Behavioral sciences in caring for adult patients with Medical/Surgical disorders using nursing process approach and critical thinking. It also intends to develop competencies required for assessment, diagnosis, treatment, nursing management, and supportive/palliative care to patients with various Medical Surgical disorders.

COMPETENCIES: On completion of Medical Surgical Nursing I course, students will be able to

1. Explain the etiology, pathophysiology, manifestations, diagnostic studies, treatments and complications of common medical and surgical disorders.
2. Perform complete health assessment to establish a data base for providing quality patient care and integrate the knowledge of anatomy, physiology and diagnostic tests in the process of data collection.
3. Identify nursing diagnoses, list them according to priority and formulate nursing care plan.
4. Perform nursing procedures skillfully and apply scientific principles while giving comprehensive nursing care to patients.
5. Integrate knowledge of pathology, nutrition and pharmacology in caring for patients experiencing various medical and surgical disorders.
6. Identify common diagnostic measures related to the health problems with emphasis on nursing assessment and responsibilities.
7. Demonstrate skill in assisting/performing diagnostic and therapeutic procedures.
8. Demonstrate competencies/skills to patients undergoing treatment for medical surgical disorders.
9. Identify the drugs used in treating patients with medical surgical conditions.
10. Plan and give relevant individual and group education on significant medical surgical topics.
11. Maintain safe environment for patients and the health care personnel in the hospital.
12. Integrate evidence-based information while giving nursing care to patients.

COURSE CONTENT**T – Theory, L/SL – Lab/Skill Lab**

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	6 (T) 4 (L/SL)	Narrate the evolution of medical surgical nursing Apply nursing process in caring for patients with medical surgical problems Execute the role of a nurse in various medical surgical setting Develop skills in assessment and care of wound	Introduction • Evolution and trends of medical and surgical nursing • International classification of diseases • Roles and responsibility of a nurse in medical and surgical settings ◦ Outpatient department ◦ In-patient unit ◦ Intensive care unit • Introduction to medical and surgical asepsis ◦ Inflammation, infection ◦ Wound healing – stages, influencing factors	• Lecture cum discussion • Demonstration & Practice session • Role play • Visit to outpatient department, in patient and intensive care unit	• Short Answer • OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Develop competency in providing pre and postoperative care	○ Wound care and dressing technique • Care of surgical patient ○ pre-operative ○ post-operative • Alternative therapies used in caring for patients with Medical Surgical Disorders		
II	15 (T) 4 (L/SL)	Explain organizational set up of the operating theatre Differentiate the role of scrub nurse and circulating nurse Describe the different positioning for various surgeries Apply principles of asepsis in handling the sterile equipment Demonstrate skill in scrubbing procedures Demonstrate skill in assessing the patient and document accurately the surgical safety checklist Develop skill in assisting with selected surgeries Explain the types, functions, and nursing considerations for different types of anaesthesia	Intraoperative Care • Organization and physical set up of the operation theatre ○ Classification ○ O.T Design ○ Staffing ○ Members of the OT team ○ Duties and responsibilities of the nurse in OT • Position and draping for common surgical procedures • Instruments, sutures and suture materials, equipment for common surgical procedures • Disinfection and sterilization of equipment • Preparation of sets for common surgical procedures • Scrubbing procedures – Gowning, masking and gloving • Monitoring the patient during the procedures • Maintenance of the therapeutic environment in OT • Assisting in major and minor operation, handling specimen • Prevention of accidents and hazards in OT • Anaesthesia – types, methods of administration, effects and stages, equipment & drugs • Legal aspects	• Lecture cum Discussion • Demonstration, Practice session, and Case Discussion • Visit to receiving bay	• Caring for patient intra operatively • Submit a list of disinfectants used for instruments with the action and precaution
III	6 (T) 4 (L/SL)	Identify the signs and symptoms of shock and electrolyte imbalances Develop skills in managing fluid and electrolyte imbalances	Nursing care of patients with common signs and symptoms and management • Fluid and electrolyte imbalance • Shock • Pain	• Lecture, discussion, demonstration • Case discussion	• Short answer • MCQ • Case report

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Perform pain assessment and plans for the nursing management			
IV	18 (T) 4 (L)	Demonstrate skill in respiratory assessment Differentiates different breath sounds and lists the indications Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of common respiratory problems Describe the health behaviour to be adopted in preventing respiratory illnesses	Nursing Management of patients with respiratory problems • Review of anatomy and physiology of respiratory system • Nursing Assessment – history taking, physical assessment and diagnostic tests • Common respiratory problems: ◦ Upper respiratory tract infections ◦ Chronic obstructive pulmonary diseases ◦ Pleural effusion, Empyema ◦ Bronchiectasis ◦ Pneumonia ◦ Lung abscess ◦ Cyst and tumors ◦ Chest Injuries ◦ Acute respiratory distress syndrome ◦ Pulmonary embolism • Health behaviours to prevent respiratory illness	• Lecture, discussion, • Demonstration • Practice session • Case presentation • Visit to PFT Lab	• Essay • Short answer • OSCE
V	16 (T) 5 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of gastrointestinal disorders Demonstrate skill in gastrointestinal assessment Prepare patient for upper and lower gastrointestinal investigations Demonstrate skill in gastric decompression, gavage, and stoma care	Nursing Management of patients with disorders of digestive system • Review of anatomy and physiology of GI system • Nursing assessment –History and physical assessment • GI investigations • Common GI disorders: ◦ Oral cavity: lips, gums and teeth ◦ GI: Bleeding, Infections, Inflammation, tumors, Obstruction, Perforation & Peritonitis ◦ Peptic & duodenal ulcer, ◦ Mal-absorption, Appendicitis, Hernias ◦ Hemorrhoids, fissures, Fistulas ◦ Pancreas: inflammation, cysts, and tumors	• Lecture, Discussion • Demonstration, • Role play • Problem Based Learning • Visit to stoma clinic	• Short answer • Quiz • OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Demonstrate skill in different feeding techniques	- o Liver: inflammation, cysts, abscess, cirrhosis, portal hypertension, hepatic failure, tumors - o Gall bladder: inflammation, Cholelithiasis, tumors • Gastric decompression, gavage and stoma care, different feeding techniques • Alternative therapies, drugs used in treatment of disorders of digestive system		
VI	20 (T) 5 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of cardiovascular disorders Demonstrate skill in cardiovascular assessment Prepare patient for invasive and non-invasive cardiac procedures Demonstrate skill in monitoring and interpreting clinical signs related to cardiac disorders Complete BLS/BCLS module	Nursing Management of patients with cardiovascular problems • Review of anatomy and physiology of cardio-vascular system • Nursing Assessment: History and Physical assessment • Invasive & non-invasive cardiac procedures • Disorders of vascular system- Hypertension, arteriosclerosis, Raynaud's disease, aneurysm and peripheral vascular disorders • Coronary artery diseases: coronary atherosclerosis, Angina pectoris, myocardial infarction • Valvular disorders: congenital and acquired • Rheumatic heart disease: pericarditis, myocarditis, endocarditis, cardiomyopathies • Cardiac dysrhythmias, heart block • Congestive heart failure, cor pulmonale, pulmonary edema, cardiogenic shock, cardiac tamponade • Cardiopulmonary arrest	• Lecture, discussion • Demonstration • Practice session • Case Discussion • Health education • Drug Book/ presentation • Completion of BCLS Module	• Care plan • Drug record • BLS/ BCLS evaluation
VII	7 (T) 3 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of hematological disorders Interpret blood reports	Nursing Management of patients with disorders of blood • Review of Anatomy and Physiology of blood • Nursing assessment: history, physical assessment & Diagnostic tests • Anemia, Polycythemia • Bleeding Disorders: clotting factor defects and platelets defects, thalassemia, leukemia, leukopenia,	• Field visit to blood bank • Counseling	• Interpretation of blood reports • Visit report

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Prepare and provides health education on blood donation	agranulocytosis • Lymphomas, myelomas		
VIII	8 (T) 2 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of endocrine disorders Demonstrate skill in assessment of endocrine organ dysfunction Prepare and provides health education on diabetic diet Demonstrate skill in insulin administration	Nursing management of patients with disorders of endocrine system • Review of anatomy and physiology of endocrine system • Nursing Assessment –History and Physical assessment • Disorders of thyroid and Parathyroid, Adrenal and Pituitary (Hyper, Hypo, tumors) • Diabetes mellitus	• Lecture, discussion, demonstration • Practice session • Case Discussion • Health education	• Prepare health education on self-administration of insulin • Submits a diabetic diet plan
IX	8 (T) 2 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of disorders of integumentary system Demonstrate skill in integumentary assessment Demonstrate skill in medicated bath Prepare and provide health education on skin care	Nursing management of patients with disorders of Integumentary system • Review of anatomy and physiology of skin • Nursing Assessment History and Physical assessment • Infection and infestations; Dermatitis • Dermatoses; infectious and Non infectious • Acne, Allergies, Eczema & Pemphigus • Psoriasis, Malignant melanoma, Alopecia • Special therapies, alternative therapies • Drugs used in treatment of disorders of integumentary system	• Lecture, discussion • Demonstration • Practice session • Case Discussion	• Drug report • Preparation of Home care plan
X	16 (T) 4 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of musculoskeletal disorders	Nursing management of patients with musculoskeletal problems • Review of Anatomy and physiology of the musculoskeletal system • Nursing Assessment: History and physical assessment, diagnostic tests • Musculoskeletal trauma: Dislocation, fracture, sprain, strain,	• Lecture/ • Discussion • Demonstration • Case Discussion • Health education	• Nursing care plan • Prepare health teaching on care of patient with cast

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Demonstrate skill in musculoskeletal assessment Prepare patient for radiological and non-radiological investigations of musculoskeletal system Demonstrate skill in crutch walking and splinting Demonstrate skill in care of patient with replacement surgeries Prepare and provide health education on bone healing	contusion, amputation • Musculoskeletal infections and tumors: Osteomyelitis, benign and malignant tumour • Orthopedic modalities: Cast, splint, traction, crutch walking • Musculoskeletal inflammation: Bursitis, synovitis, arthritis • Special therapies, alternative therapies • Metabolic bone disorder: Osteoporosis, osteomalacia and Paget's disease • Spinal column defects and deformities – tumor, prolapsed intervertebral disc, Pott's spine • Rehabilitation, prosthesis • Replacement surgeries		
XI	20 (T) 3 (L)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of patients with communicable diseases Demonstrate skill in barrier and reverse barrier techniques Demonstrate skill in execution of different isolation protocols	Nursing management of patients with Communicable diseases • Overview of infectious diseases, the infectious process • Nursing Assessment: History and Physical assessment, Diagnostic tests • Tuberculosis • Diarrhoeal diseases, hepatitis A-E, Typhoid • Herpes, chickenpox, Smallpox, Measles, Mumps, Influenza • Meningitis • Gas gangrene • Leprosy • Dengue, Plague, Malaria, Chikungunya, swine flu, Filariasis • Diphtheria, Pertussis, Tetanus, Poliomyelitis • COVID-19 • Special infection control measures: Notification, Isolation, Quarantine, Immunization	• Lecture, discussion, demonstration • Practice session • Case Discussion/ seminar • Health education • Drug Book/ presentation • Refer TB Control & Management module	• Prepares and submits protocol on various isolation techniques

CLINICAL PRACTICUM**CLINICAL PRACTICUM: 6 Credits (480 hours) - 18 weeks × 27 hours**

PRACTICE COMPETENCIES: On completion of the clinical practicum, the students will be able to apply nursing process and critical thinking in delivering holistic nursing care including rehabilitation to the adult patients undergoing surgery, with shock and fluid and electrolyte imbalance and with selected medical & surgical conditions i.e., Gastrointestinal, Respiratory, Endocrine, Orthopedic, Dermatology and Cardiovascular disorders.

The students will be competent to:

1. Utilize the nursing process in providing care to the sick adults in the hospital.
 - a. Perform complete health assessment to establish a data base for providing quality patient care.
 - b. Integrate the knowledge of diagnostic tests in the process of data collection.
 - c. Identify nursing diagnoses and list them according to priority.
 - d. Formulate nursing care plan, using problem solving approach.
 - e. Apply scientific principles while giving nursing care to patients.
 - f. Perform nursing procedures skillfully on patients.
 - g. Establish/develop interpersonal relationship with patients and family members.
 - h. Evaluate the expected outcomes and modify the plan according to the patient needs.
2. Provide comfort and safety to adult patients in the hospital.
3. Maintain safe environment for patients during hospitalization.
4. Explain nursing actions appropriately to the patients and family members.
5. Ensure patient safety while providing nursing procedures.
6. Assess the educational needs of the patient and their family related to medical and surgical disorders and provide appropriate health education to patients.
7. Provide pre, intra and post-operative care to patients undergoing surgery.
8. Integrate knowledge of pathology, nutrition and pharmacology for patients experiencing various medical and surgical disorders.
9. Integrate evidence-based information while giving nursing care to patients.
10. Demonstrate the awareness of legal and ethical issues in nursing practice.

I. NURSING MANAGEMENT OF PATIENTS WITH MEDICAL CONDITIONS**A. Skill Lab****Use of manikins and simulators**

- Intravenous therapy
- Oxygen through mask
- Oxygen through nasal prongs
- Venturi mask
- Nebulization
- Chest physiotherapy

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
General medical	4	Develop skill in intravenous injection administration and IV therapy	• Intravenous therapy ○ IV cannulation ○ IV maintenance and monitoring ○ Administration of IV medication	• Care Study – 1 • Health education • Clinical presentation/ Care	• Clinical evaluation • OSCE • Care Study

		Assist with diagnostic procedures Develop skill in the management of patients with Respiratory problems Develop skill in managing patients with metabolic abnormality	• Care of patient with Central line • Preparation and assisting and monitoring of patients undergoing diagnostic procedures such as thoracentesis, Abdominal paracentesis <i>Management patients with respiratory problems</i> • Administration of oxygen through mask, nasal prongs, venturi mask • Pulse oximetry • Nebulization • Chest physiotherapy • Postural drainage • Oropharyngeal suctioning • Care of patient with chest drainage • Diet Planning ◦ High Protein diet ◦ Diabetic diet • Insulin administration • Monitoring GRBS	note) – 1	evaluation • Care Note/ Clinical presentation
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II. NURSING MANAGEMENT OF PATIENTS WITH SURGICAL CONDITIONS

A. Skill Lab

Use of manikins and simulators

- Nasogastric aspiration
- Surgical dressing
- Suture removal
- Colostomy care/ileostomy care
- Enteral feeding

B. Clinical Postings

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
General surgical wards	4	Develop skill in caring for patients during pre- and post-operative period Assist with diagnostic procedures Develop skill in managing patient with Gastro-intestinal Problems	• Pre-Operative care • Immediate Post-operative care • Post-operative exercise • Pain assessment • Pain Management • Assisting diagnostic procedure and after care of patients undergoing ◦ Colonoscopy ◦ ERCP ◦ Endoscopy ◦ Liver Biopsy	• Care study – 1 • Health teaching	• Clinical evaluation, OSCE • Care study • Care note/ Clinical presentation

		Develop skill in wound management	• Nasogastric aspiration • Gastrostomy/Jejunostomy feeds • Ileostomy/Colostomy care • Surgical dressing • Suture removal • Surgical soak • Sitz bath • Care of drain		
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III. NURSING MANAGEMENT OF PATIENTS WITH CARDIAC CONDITIONS

A. Skill Lab

Use of manikins and simulators

- Cardiovascular assessment
- Interpreting ECG
- BLS/BCLS
- CPR
- ABG analysis
- Taking blood sample
- Arterial blood gas analysis – interpretation

B. Clinical Postings

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Cardiology wards	2	Develop skill in management of patients with cardiac problems Develop skill in management of patients with disorders of Blood	• Cardiac monitoring • Recording and interpreting ECG • Arterial blood gas analysis – interpretation • Administer cardiac drugs • Preparation and after care of patients for cardiac catheterization • CPR • Collection of blood sample for: ◦ Blood grouping/cross matching ◦ Blood sugar ◦ Serum electrolytes • Assisting with blood transfusion • Assisting for bone marrow aspiration • Application of anti-embolism stockings (TED hose) • Application/maintenance of sequential Compression device	• Cardiac assessment – 1 • Drug presentation – 1	• Clinical evaluation • Drug presentation

IV. NURSING MANAGEMENT OF PATIENTS WITH DISORDERS OF INTEGUMENTARY SYSTEM**A. Skill Lab**

Use of manikins and simulators

Application of topical medication

B. Clinical Postings

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Dermatology wards	1	Develop skill in management of patients with disorders of integumentary system	- Intradermal injection-Skin allergy testing - Application of topical medication - Medicated bath		Clinical evaluation

V. NURSING MANAGEMENT OF PATIENTS WITH COMMUNICABLE DISEASES**A. Skill Lab**

- Barrier Nursing
- Reverse Barrier Nursing
- Standard precautions

B. Clinical Postings

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Isolation ward	1	Develop skill in the management of patients requiring isolation	- Barrier Nursing - Reverse barrier nursing - Standard precautions (Universal precaution), use of PPE, needle stick and sharp injury prevention, Cleaning and disinfection, Respiratory hygiene, waste disposal and safe injection practices)	Care Note – 1	- Clinical evaluation - Care note

VI. NURSING MANAGEMENT OF PATIENTS WITH MUSCULOSKELETAL PROBLEMS**A. Skill Lab**

Use of manikins and simulators

- Range of motion exercises
- Muscle strengthening exercises
- Crutch walking

B. Clinical Postings

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Orthopedic wards	2	Develop skill in management of patients with musculoskeletal problems	- Preparation of patient with Myelogram/CT/MRI - Assisting with application & removal of POP/Cast - Preparation, assisting and after care of patient with Skin	Care Note – 1	- Clinical evaluation, - Care note

			traction/skeletal traction • Care of orthotics • Muscle strengthening exercises • Crutch walking • Rehabilitation		
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VII. NURSING MANAGEMENT OF PATIENTS IN THE OPERATING ROOMS**A. Skill Lab****Use of manikins and simulators**

- Scrubbing, gowning and gloving
- Orient to instruments for common surgeries
- Orient to suture materials
- Positioning

B. Clinical Postings

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Operation theatre	4	Develop skill in caring for intraoperative patients	• Position and draping • Preparation of operation table • Set up of trolley with instrument • Assisting in major and minor operation • Disinfection and sterilization of equipment • Scrubbing procedures – Gowning, masking and gloving • Intra operative monitoring	• Assist as circulatory nurse – 4 • Positioning & draping – 5 • Assist as scrub nurse in major surgeries – 4 • Assist as scrub nurse in minor surgeries – 4	• Clinical evaluation • OSCE

PHARMACOLOGY - II

including Fundamentals of Prescribing Module

PLACEMENT: IV SEMESTER**THEORY: 3 Credits (60 hours)**

DESCRIPTION: This course is designed to enable students to acquire understanding of Pharmacodynamics, Pharmacokinetics, principles of therapeutics & nursing implications. Further it develops understanding of fundamental principles of prescribing in students.

COMPETENCIES: On completion of the course, the students will be able to

1. Explain the drugs used in the treatment of ear, nose, throat and eye disorders.
2. Explain the drugs used in the treatment of urinary system disorders.
3. Describe the drugs used in the treatment of nervous system disorders.
4. Explain the drugs used for hormonal replacement and for the pregnant women during antenatal, intra natal and postnatal period.
5. Explain the drugs used to treat emergency conditions and immune disorders.
6. Discuss the role and responsibilities of nurses towards safe administration of drugs used to treat disorders of various systems with basic understanding of pharmacology.
7. Demonstrate understanding about the drugs used in alternative system of medicine.
8. Demonstrate understanding about the fundamental principles of prescribing.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	4 (T)	Describe drugs used in disorders of ear, nose, throat and eye and nurses' responsibilities	Drugs used in disorders of ear, nose, throat & Eye • Antihistamines • Topical applications for eye (Chloramphenicol, Gentamycin eye drops), ear (Soda glycerin, boric spirit ear drops), nose and buccal cavity-chlorhexidine mouthwash • Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
II	4 (T)	Describe drugs acting on urinary system & nurse's responsibilities	Drugs used on urinary system • Pharmacology of commonly used drugs ◦ Renin angiotensin system ◦ Diuretics and antidiuretics ◦ Drugs toxic to kidney ◦ Urinary antiseptics ◦ Treatment of UTI – acidifiers and alkalinizers • Composition, action, dosage, route, indications, contraindications, Drug interactions, side effects, adverse effects toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
III	10 (T)	Describe drugs used on nervous system & nurse's responsibilities	Drugs acting on nervous system • Basis & applied pharmacology of commonly used drugs • Analgesics and anaesthetics ◦ Analgesics: Non-steroidal anti-inflammatory (NSAID) drugs ◦ Antipyretics ◦ Opioids & other central analgesics ✓ General (techniques of GA, pre anesthetic medication) & local anesthetics ✓ Gases: oxygen, nitrous, oxide, carbon-dioxide & others • Hypnotics and sedatives • Skeletal muscle relaxants • Antipsychotics ◦ Mood stabilizers	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Antidepressants • Antianxiety Drugs • Anticonvulsants • Drugs for neurodegenerative disorders & miscellaneous drugs • Stimulants, ethyl alcohol and treatment of methyl alcohol poisoning • Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects toxicity and role of nurse		
IV	5 (T)	Describe drugs used for hormonal disorder & supplementation, contraception & medical termination of pregnancy & nurse's responsibilities	Drugs used for hormonal, disorders and supplementation, contraception and medical termination of pregnancy • Estrogens and progesterones ○ Oral contraceptives and hormone replacement therapy • Vaginal contraceptives • Drugs for infertility and medical termination of pregnancy ○ Uterine stimulants and relaxants • Composition, actions dosage route indications contraindications, drugs interactions, side effects, adverse effects, toxicity and role of nurse	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
V	3 (T)	Develop understanding about important drugs used for women before, during and after labour	Drugs used for pregnant women during antenatal, labour and postnatal period • Tetanus prophylaxis • Iron and Vit K1 supplementation • Oxytocin, Misoprostol • Ergometrine • Methyl prostaglandin F2-alpha • Magnesium sulphate • Calcium gluconate	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type
VI	10 (T)	Describe drugs used in deaddiction, emergency, poisoning, vitamins & minerals supplementation, drugs used for immunization & immune-suppression & nurse's responsibilities	Miscellaneous • Drugs used for deaddiction • Drugs used in CPR and emergency- adrenaline, Chlorpheniramine, hydrocortisone, Dexamethasone • IV fluids & electrolytes replacement • Common poisons, drugs used for treatment of poisoning ○ Activated charcoal	• Lecture cum Discussion • Drug study/ presentation	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- o Ipecac - o Antidotes, - o Anti-snake venom (ASV) • Vitamins and minerals supplementation • Vaccines & sera (Universal immunization program schedules) • Anticancer drugs: Chemotherapeutic drugs commonly used • Immuno-suppressants and Immunostimulants		
VII	4 (T)	Demonstrate awareness of common drugs used in alternative system of medicine	Introduction to drugs used in alternative systems of medicine • Ayurveda, Homeopathy, Unani and Siddha etc. • Drugs used for common ailments	• Lecture cum Discussion • Observational visit	• Short answer • Objective type
VIII	20 (T)	Demonstrate understanding about fundamental principles of prescribing	Fundamental principles of prescribing • Prescriptive role of nurse practitioners: Introduction • Legal and ethical issues related to prescribing • Principles of prescribing • Steps of prescribing • Prescribing competencies	• Completion of module on Fundamental principles of prescribing	• Short answer • Assignments evaluation

PATHOLOGY - II AND GENETICS

PLACEMENT: IV SEMESTER

THEORY: 1 Credit (20 hours) (Includes lab hours also)

DESCRIPTION: This course is designed to enable students to acquire knowledge of pathology of various disease conditions, understanding of genetics, its role in causation and management of defects and diseases and to apply this knowledge in practice of nursing.

COMPETENCIES: On completion of the course, the students will be able to

1. Apply the knowledge of pathology in understanding the deviations from normal to abnormal pathology
2. Rationalize the various laboratory investigations in diagnosing pathological disorders
3. Demonstrate the understanding of the methods of collection of blood, body cavity fluids, urine and feces for various tests
4. Apply the knowledge of genetics in understanding the various pathological disorders
5. Appreciate the various manifestations in patients with diagnosed genetic abnormalities
6. Rationalize the specific diagnostic tests in the detection of genetic abnormalities.
7. Demonstrate the understanding of various services related to genetics.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	5 (T)	Explain pathological changes in disease conditions of various systems	Special Pathology: Pathological changes in disease conditions of selected systems 1. Kidneys and Urinary tract - Glomerulonephritis - Pyelonephritis - Renal calculi - Cystitis - Renal Cell Carcinoma - Renal Failure (Acute and Chronic) 2. Male genital systems - Cryptorchidism - Testicular atrophy - Prostatic hyperplasia - Carcinoma penis and Prostate. 3. Female genital system - Carcinoma cervix - Carcinoma of endometrium - Uterine fibroids - Vesicular mole and Choriocarcinoma - Ovarian cyst and tumors 4. Breast - Fibrocystic changes - Fibroadenoma - Carcinoma of the Breast 5. Central nervous system - Meningitis. - Encephalitis - Stroke - Tumors of CNS	- Lecture - Discussion - Explain using slides, X-rays and scans - Visit to pathology lab, endoscopy unit and OT	- Short answer - Objective type
II	5 (T)	Describe the laboratory tests for examination of body cavity fluids, urine and faeces	Clinical Pathology - Examination of body cavity fluids: - Methods of collection and examination of CSF and other body cavity fluids (sputum, wound discharge) specimen for various clinical pathology, biochemistry and microbiology tests	- Lecture - Discussion - Visit to clinical lab and biochemistry lab	- Short answer - Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Analysis of semen: ◦ Sperm count, motility and morphology and their importance in infertility • Urine: ◦ Physical characteristics, Analysis, Culture and Sensitivity • Faeces: ◦ Characteristics ◦ Stool examination: Occult blood, Ova, Parasite and Cyst, Reducing substance etc. ◦ Methods and collection of urine and faeces for various tests		

GENETICS

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	2 (T)	Explain nature, principles and perspectives of heredity	Introduction: • Practical application of genetics in nursing • Impact of genetic condition on families • Review of cellular division: mitosis and meiosis • Characteristics and structure of genes • Chromosomes: sex determination • Chromosomal aberrations • Patterns of inheritance • Mendelian theory of inheritance • Multiple allots and blood groups • Sex linked inheritance • Mechanism of inheritance • Errors in transmission (mutation)	• Lecture • Discussion • Explain using slides	• Short answer • Objective type
II	2 (T)	Explain maternal, prenatal and genetic influences on development of defects and diseases	Maternal, prenatal and genetic influences on development of defects and diseases • Conditions affecting the mother: genetic and infections • Consanguinity atopy • Prenatal nutrition and food allergies • Maternal age	• Lecture • Discussion • Explain using slides	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Maternal drug therapy • Prenatal testing and diagnosis • Effect of Radiation, drugs and chemicals • Infertility • Spontaneous abortion • Neural Tube Defects and the role of folic acid in lowering the risks • Down syndrome (Trisomy 21)		
III	2 (T)	Explain the screening methods for genetic defects and diseases in neonates and children	Genetic testing in the neonates and children • Screening for ◦ Congenital abnormalities ◦ Developmental delay ◦ Dysmorphism	• Lecture • Discussion • Explain using slides	• Short answer • Objective type
IV	2 (T)	Identify genetic disorders in adolescents and adults	Genetic conditions of adolescents and adults • Cancer genetics: Familial cancer • Inborn errors of metabolism • Blood group alleles and hematological disorder • Genetic haemochromatosis • Huntington's disease • Mental illness	• Lecture • Discussion • Explain using slides	• Short answer • Objective type
V	2 (T)	Describe the role of nurse in genetic services and counselling	Services related to genetics • Genetic testing • Gene therapy • Genetic counselling • Legal and Ethical issues • Role of nurse	• Lecture • Discussion	• Short answer • Objective type

ADULT HEALTH NURSING - II WITH INTEGRATED PATHOPHYSIOLOGY including Geriatric Nursing AND PALLIATIVE CARE MODULE

PLACEMENT: IV SEMESTER

THEORY: 7 Credits (140 hours)

PRACTICUM: Lab/Skill Lab (SL): 1 Credit (40 hours) Clinical: 6 Credits (480 hours)

DESCRIPTION: This course is designed to equip the students to review and apply their knowledge of Anatomy, Physiology, Biochemistry and Behavioral sciences in caring for adult patients with Medical/Surgical disorders using nursing process approach. It also intends to develop competencies required for assessment, diagnosis, treatment, nursing management, and supportive/palliative and rehabilitative care to adult patients with various Medical Surgical disorders.

COMPETENCIES: On completion of the course the students will apply nursing process and critical thinking in delivering holistic nursing care with selected Medical and Surgical conditions.

At the completion of Adult Health Nursing II course, students will

1. Explain the etiology, pathophysiology, manifestations, diagnostic studies, treatments and complications of selected common medical and surgical disorders.
2. Perform complete health assessment to establish a data base for providing quality patient care and integrate the knowledge of diagnostic tests in the process of data collection.
3. Identify diagnoses, list them according to priority and formulate nursing care plan.
4. Perform nursing procedures skillfully and apply scientific principles while giving comprehensive nursing care to patients.
5. Integrate knowledge of anatomy, physiology, pathology, nutrition and pharmacology in caring for patients experiencing various medical and surgical disorders.
6. Identify common diagnostic measures related to the health problems with emphasis on nursing assessment and responsibilities.
7. Demonstrate skill in assisting/performing diagnostic and therapeutic procedures.
8. Demonstrate competencies/skills to patients undergoing treatment for medical surgical disorders.
9. Identify the drugs used in treating patients with selected medical surgical conditions.
10. Plan and provide relevant individual and group education on significant medical surgical topics.
11. Maintain safe environment for patients and the health care personnel in the hospital.

COURSE OUTLINE

T – Theory, L/SL – Lab/Skill Lab

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	12 (T) 4 (SL)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic measures and medical, surgical, nutritional and nursing management of patients with ENT disorders	Nursing management of patient with disorders of Ear, Nose and Throat (Includes etiology, pathophysiology, clinical manifestations, diagnostic measures and medical, surgical, nutritional and nursing management) • Review of anatomy and physiology of the ear, nose and throat • History, physical assessment, and diagnostic tests • Ear ◦ External ear: deformities otalgia, foreign bodies and tumors ◦ Middle ear: impacted wax, tympanic membrane perforation, otitis media, and tumors ◦ Inner ear: Meniere's disease, labyrinthitis, ototoxicity tumors • Upper respiratory airway infections: Rhinitis, sinusitis, tonsillitis, laryngitis • Epistaxis, Nasal obstruction, laryngeal obstruction • Deafness and its management	• Lecture and discussion • Demonstration of hearing aids, nasal packing, medication administration • Visit to audiology and speech clinic	• MCQ • Short answer • Essay • OSCE • Assessment of skill (using checklist) • Quiz • Drug book

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
II	12 (T) 4 (SL)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic measures and management of patients with disorders of eye Describe eye donation, banking and transplantation	Nursing management of patient with disorder of eye - Review of anatomy and physiology of the eye - History, physical assessment, diagnostic assessment Eye Disorders - Refractive errors - Eyelids: infection, deformities - Conjunctiva: inflammation and infection bleeding - Cornea: inflammation and infection - Lens: cataract - Glaucoma - Retinal detachment - Blindness - Eye donation, banking and transplantation	- Lecture and discussion - Demonstration of visual aids, lens, medication administration - Visit to eye bank	- MCQ - Short Essay - OSCE - Drug book
III	15 (T) 4 (L/SL)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of Kidney and urinary system disorders Demonstrate skill in genitourinary assessment Prepare patient for genitourinary investigations Prepare and provide health education on prevention of renal calculi	Nursing management of patient with Kidney and Urinary problems - Review of Anatomy and physiology of the genitourinary system - History, physical assessment, diagnostic tests - Urinary tract infections: acute, chronic, lower, upper - Nephritis, nephrotic syndrome - Renal calculi - Acute and chronic renal failure - Disorders of ureter, urinary bladder and Urethra - Disorders of prostate: inflammation, infection, stricture, obstruction, and Benign Prostate Hypertrophy	- Lecture cum Discussion - Demonstration - Case Discussion - Health education - Drug book - Field visit – Visits hemodialysis unit	- MCQ - Short Note - Long essay - Case report - Submits health teaching on prevention of urinary calculi
IV	6 (T)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of male reproductive disorders	Nursing management of disorders of male reproductive system - Review of Anatomy and physiology of the male reproductive system - History, Physical Assessment, Diagnostic tests - Infections of testis, penis and adjacent structures: Phimosis, Epididymitis, and	- Lecture, Discussion - Case Discussion - Health education	Short essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			Orchitis • Sexual dysfunction, infertility, contraception • Male Breast Disorders: gynecomastia, tumor, climacteric changes		
V	10 (T) 4 (SL)	Explain the etiology, pathophysiology, clinical manifestations, types, diagnostic measures and management of patients with disorders of burns/cosmetic surgeries and its significance	Nursing management of patient with burns, reconstructive and cosmetic surgery • Review of anatomy and physiology of the skin and connective tissues • History, physical assessment, assessment of burns and fluid & electrolyte loss • Burns • Reconstructive and cosmetic surgery for burns, congenital deformities, injuries and cosmetic purposes, gender reassignment • Legal and ethical aspects • Special therapies: LAD, vacuumed dressing, Laser, liposuction, skin health rejuvenation, use of derma filters	• Lecture and discussion • Demonstration of burn wound assessment, vacuum dressing and fluid calculations • Visit to burn rehabilitation centers	• OSCE • Short notes
VI	16 (T) 4 (L/SL)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic measures and management of patients with neurological disorders	Nursing management of patient with neurological disorders • Review of anatomy and physiology of the neurological system • History, physical and neurological assessment, diagnostic tests • Headache, Head injuries • Spinal injuries: Paraplegia, Hemiplegia, Quadriplegia • Spinal cord compression: herniation of in vertebral disc • Intra cranial and cerebral aneurysms • Meningitis, encephalitis, brain, abscess, neuro-cysticercosis • Movement disorders: Chorea, Seizures & Epilepsies • Cerebrovascular disorders: CVA • Cranial, spinal neuropathies: Bell's palsy, trigeminal neuralgia • Peripheral Neuropathies • Degenerative diseases: Alzheimer's disease, Parkinson's disease • <i>Guillain-Barré syndrome</i>, Myasthenia gravis & Multiple sclerosis	• Lecture and discussion • Demonstration of physiotherapy, neuro assessment, tracheostomy care • Visit to rehabilitation center, long term care clinics, EEG, NCV study unit,	• OSCE • Short notes • Essay • Drug book

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			Rehabilitation of patient with neurological deficit		
VII	12 (T) 4 (L/SL)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of immunological disorders Prepare and provides health education on prevention of HIV infection and rehabilitation Describe the national infection control programs	Nursing management of patients with Immunological problems - Review of Immune system - Nursing Assessment: History and Physical assessment - HIV & AIDS: Epidemiology, Transmission, Prevention of Transmission and management of HIV/AIDS - Role of Nurse: Counseling, Health education and home care consideration and rehabilitation - National AIDS Control Program – NACO, various national and international agencies for infection control	- Lecture, discussion - Case Discussion/ seminar - Refer Module on HIV/AIDS	
VIII	12 (T) 4 (L/SL)	Explain the etiology, pathophysiology, types, clinical manifestations, staging, diagnostic measures and management of patients with different cancer, treatment modalities including newer treatments	Nursing management of patient with Oncological conditions - Structure and characteristics of normal and cancer cells - History, physical assessment, diagnostic tests - Prevention screening early detections warning sign of cancer - Epidemiology, etiology classification, Pathophysiology, staging clinical manifestations, diagnosis, treatment modalities and medical and surgical nursing management of Oncological condition - Common malignancies of various body system eye, ear, nose, larynx, breast, cervix, ovary, uterus, sarcoma, renal, bladder, kidney, prostate Brain, Spinal cord. - Oncological emergencies - Modalities of treatment: Chemotherapy, Radiotherapy: Radiation safety, AERB regulations, Surgical intervention, Stem cell and bone marrow transplant, Immunotherapy, Gene therapy - Psychological aspects of cancer: anxiety, depression, insomnia, anger - Supportive care - Hospice care	- Lecture and discussion - Demonstration of chemotherapy preparation and administration - Visit to BMT, radiotherapy units (linear accelerator, brachytherapy, etc.), nuclear medicine unit	- OSCE - Essay - Quiz - Drug book - Counseling, health teaching
				Completion of palliative care	

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
				module during clinical hours (20 hours)	
IX	15 (T) 4 (L/SL)	Explain the types, policies, guidelines, prevention and management of disaster and the etiology, pathophysiology, clinical manifestations, diagnostic measures and management of patients with acute emergencies	Nursing management of patient in Emergency and Disaster situations Disaster Nursing • Concept and principles of disaster nursing, Related Policies • Types of disaster: Natural and manmade • Disaster preparedness: Team, guidelines, protocols, equipment, resources • Etiology, classification, Pathophysiology, staging, clinical manifestation, diagnosis, treatment modalities and medical and surgical nursing management of patient with medical and surgical emergencies – Poly trauma, Bites, Poisoning and Thermal emergencies • Principles of emergency management • Medico legal aspects	• Lecture and discussion • Demonstration of disaster preparedness (Mock drill) and triaging • Field visit to local disaster management centers or demo by fire extinguishers • Group presentation (role play, skit, concept mapping) on different emergency care • Refer Trauma care management/ ATCN module • Guided reading on National Disaster Management Authority (NDMA) guidelines	• OSCE • Case presentations and case study
X	10 (T)	Explain the Concept, physiological changes, and psychosocial problems of ageing Describe the nursing management of the elderly	Nursing care of the elderly • History and physical assessment • Aging process and age-related body changes and psychosocial aspects • Stress and coping in elder patient • Psychosocial and sexual abuse of elderly • Role of family and formal and non-formal caregivers • Use of aids and prosthesis (hearing aids, dentures) • Legal and ethical issues • National programs for elderly, privileges, community programs and health services • Home and institutional care	• Lecture and discussion • Demonstration of communication with visual and hearing impaired • Field visit to old age homes	• OSCE • Case presentations • Assignment on family systems of India focusing on geriatric population
XI	15 (T) 8 (L/SL)	Explain the etiology, pathophysiology, clinical manifestations, diagnostic measures and management of patients in critical care units	Nursing management of patients in critical Care units • Principles of critical care nursing • Organization: physical set-up, policies, staffing norms • Protocols, equipment and supplies	• Lecture and discussion • Demonstration on the use of mechanical ventilators, cardiac monitors etc. • Clinical practice in	• Objective type • Short notes • Case presentations • Assessment of skill on monitoring of

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Use and application of critical care biomedical equipment: ventilators, cardiac monitors, defibrillators, infusion pump, Resuscitation equipment and any other • Advanced Cardiac Life support • Nursing management of critically ill patient • Transitional care • Ethical and Legal Aspects • Breaking Bad News to Patients and/or their families: Communication with patient and family • End of life care	different ICUs	patients in ICU. • Written assignment on ethical and legal issues in critical care
XII	5 (T)	Describe the etiology, pathophysiology, clinical manifestations, diagnostic measures and management of patients with occupational/ industrial health disorders	Nursing management of patients occupational and industrial disorders • History, physical examination, Diagnostic tests • Occupational diseases and management	• Lecture and discussion • Industrial visit	• Assignment on industrial health hazards

CLINICAL PRACTICUM

CLINICAL PRACTICUM: 6 Credits (480 Hours) – 20 weeks × 24 hours

PRACTICE COMPETENCIES: On completion of the clinical practicum, the students will develop proficiency in applying nursing process and critical thinking in rendering holistic nursing care including rehabilitation to the adult/geriatric patients admitted in Critical Care Units, undergoing cosmetic and reconstructive surgery and with selected medical & surgical disorders of ear, nose, throat, eye, Genitourinary, reproductive, immunologic, nervous systems and in emergency/disaster conditions.

The students will be competent to

- Utilize the nursing process in providing care to the sick adults in the hospital
 - Perform complete health assessment to establish a data base for providing quality patient care.
 - Integrate the knowledge of diagnostic tests in patient assignment.
 - Identify nursing diagnoses and list them according to priority.
 - Formulate nursing care plan, using problem solving approach.
 - Apply scientific principles while giving nursing care to patients.
 - Develop skill in performing nursing procedures applying scientific principle.
 - Establish/develop interpersonal relationship with patients and family members.
 - Evaluate the expected outcomes and modify the plan according to the patient needs.
- Provide comfort and safety to adult patients in the hospital.
- Maintain safe environment for patients during hospitalization.
- Explain nursing actions appropriately to the patients and family members.
- Ensure patient safety while providing nursing procedures.
- Assess the educational needs of the patient and their family related to medical and surgical disorders and provide appropriate health education to patients.

7. Provide pre, intra and post-operative care to patients undergoing surgery.
8. Integrate knowledge of pathology, nutrition and pharmacology for patients experiencing selected medical and surgical disorders.
9. Integrate evidence-based information while giving nursing care to patients.
10. Demonstrate the awareness of legal and ethical issues in nursing practice.

I. Nursing Management of Patients with ENT Disorders

A. Skill Lab

Use of manikins and simulators

- Tracheostomy care
- Instilling Ear and Nasal medications
- Bandage application

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
ENT Ward and OPD	2	Provide care to patients with ENT disorders Educate the patients and their families	• Examination of ear, nose, throat and History taking • Applying bandages to Ear, Nose • Tracheostomy care • Preparation of patient, assisting and monitoring of patients undergoing diagnostic procedures ◦ Auditory screening tests ◦ Audiometric tests • Preparing the patient and assisting in special procedures like Anterior/ posterior nasal packing, Ear Packing and Syringing • Preparation and after care of patients undergoing ENT surgical procedures • Instillation of drops/medication	• ENT assessment –1 • Case study/ Clinical presentation – 1	• Clinical evaluation • OSCE • Case report study/ Clinical presentation

II. Nursing Management of Patients with Eye Conditions

A. Skill Lab

Use of manikins and simulators

- Instilling Eye medications
- Eye irrigation
- Eye bandage

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Ophthalmology unit	2	Develop skill in providing care to patients with Eye disorders Educate the patients and	• History taking, Examination of eyes and interpretation • Assisting procedures ◦ Visual acuity ◦ Fundoscopy, retinoscopy, ophthalmoscopy, tonometry, ◦ Refraction tests	• Eye assessment – 1 • Health teaching • Case study/ Clinical Presentation– 1	• Clinical evaluation • OSCE • Clinical presentation

		their families	• Pre and post-operative care • Instillation of drops/ medication • Eye irrigation • Application of eye bandage • Assisting with foreign body removal		
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III. Nursing Management of Patients with Kidney and Urinary System Disorders

A. Skill Lab

Use of manikins and simulators

- Assessment: kidney & urinary system
- Preparation: dialysis
- Catheterization and care

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Renal ward/ nephrology ward including Dialysis unit	2	Develop skill in Management of patients with urinary, male reproductive problems	• Assessment of kidney and urinary system ◦ History taking ◦ Physical examination ◦ Testicular self-examination ◦ digital rectal exam • Preparation and assisting with diagnostic and therapeutic procedures ◦ Cystoscopy, Cystometrogram, ◦ Contrast studies: IVP etc. ◦ Peritoneal dialysis ◦ Hemodialysis, ◦ Lithotripsy ◦ Specific tests: Semen analysis, gonorrhoea test, Renal/ Prostate Biopsy etc. • Catheterization: care • Bladder irrigation • I/O recording and monitoring • Ambulation and exercise	• Assessment – 1 • Drug presentation – 1 • Care study/ Clinical presentation – 1 • Preparing and assisting in hemodialysis	• Clinical evaluation • Care plan • OSCE • Quiz • Drug presentation

IV. Nursing Management of Patients with Burns and Reconstructive Surgery

A. Skill Lab

Use of manikins and simulators

- Assessment of burns wound
- Wound dressing

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Burns unit/ reconstructive surgical unit	2	Develop skill in burns assessment and providing care to patients with different types of burns Develop skill in providing care to patients with different types of cosmetic and reconstructive surgeries	- Assessment of burns - First aid of burns - Fluid & electrolyte replacement therapy - Skin care - Care of Burn wounds - Bathing - Dressing - Pre-operative and post-operative care of patients - Caring of skin graft and post cosmetic surgery - Rehabilitation	- burn wound assessment – 1 - care study/case presentation – 1	- Clinical evaluation, - Care study/case report

V. Nursing Management of Patients with neurological disorders**A. Skill Lab****Use of manikins and simulators**

- Range of motion exercises
- Muscle strengthening exercises
- Crutch walking

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Neurology- medical/ Surgery wards	3	Develop skill in Management of patients with Neurological problems	- History taking, Neurological Examination - Patient monitoring - Prepare and assist for various invasive and non-invasive diagnostic procedures - Range of motion exercises, muscle strengthening - Care of medical, surgical and rehabilitative patients	- neuro- assessment –1 - Case study/ case presentation – 1 - Drug presentation – 1	- Clinical evaluation - Neuro assessment - OSCE - Case report/ presentations

VI. Nursing Management of Patients with Immunological Disorders**A. Skill Lab**

- Barrier Nursing
- Reverse Barrier Nursing

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Isolation ward/ Medical ward	1	Develop skill in the Management of patients with immunological disorders	- History taking - Immunological status assessment (e.g. HIV) and Interpretation of specific tests - Caring of patients with low immunity - Practicing of standard safety measures, precautions/barrier nursing/reverse barrier/isolation skills	- Assessment of immune status - Teaching of isolation to patient and family care givers - Nutritional management - Care Note – 1	- Care note - Quiz - Health Teaching

VII. Nursing Management of Patients with disorders of Oncological conditions**A. Skill Lab****Use of manikins and simulators**

- Application of topical medication
- Administration of chemotherapy

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Oncology wards (including day care radiotherapy unit)	3	Develop skill in providing care to patients with oncological disorders	- History taking & physical examination of cancer patients - Screening for common cancers: TNM classification - Preparation, assisting and after care patients undergoing diagnostic procedures – Biopsies/FNAC – Pap smear – Bone-marrow aspiration - Various modalities of treatment – Chemotherapy – Radiotherapy – Pain management – Stoma therapy – Hormonal therapy – Immuno therapy – Gene therapy – Alternative therapy - Stoma care and feeding - Caring of patients treated with nuclear medicine - Rehabilitation	- Assessment – 1 - Care study/ clinical presentation – 1 - Pre and post-operative care of patient with various modes of cancer treatment - Teaching on BSE to family members - Visit to palliative care unit	- Clinical evaluation - Care study - Quiz - Drug book

VIII. Nursing Management of Patients in emergency conditions**A. Skill Lab****Use of manikins and simulators**

- Assessment: primary and secondary survey
- Trauma care: bandaging, wound care, splinting, positions

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Emergency room/ Emergency unit	2	Develop skill in providing care to patients with emergency health problems	• Practicing 'triage' • Primary and secondary survey in emergency • Examination, investigations & their interpretations, in emergency & disaster situations • Emergency care of medical and traumatic injury patients • Documentations, assisting in legal procedures in emergency unit • Managing crowd • Counseling the patient and family in dealing with grieving & bereavement	• Triage • Immediate care • Use of emergency trolley	• Clinical evaluation • Quiz

IX. Nursing Management of geriatric patients**A. Skill Lab****Use of manikins and simulators**

- Use of assistive safety devices

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Geriatric ward	1	Develops skill in geriatric assessment and providing care to patients with geriatric illness	• History taking and assessment of Geriatric patient	• Geriatric assessment – 1 • Care of normal and geriatric patient with illness • Fall risk assessment – 1 • Functional status assessment – 1	• Clinical evaluation • Care plan

X. Nursing Management of Patients in critical care units**A. Skill Lab****Use of manikins and simulators**

- Assessment critically ill
- ET tube set up –suction
- TT suction
- Ventilator set up
- Chest drainage
- Bag mask ventilation

- Central & Peripheral line
- Pacemaker

B. Clinical Postings

Clinical area/unit	Duration (weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Critical Care Unit	2	Develop skill in assessment of critically ill and providing care to patients with critical health conditions	• Assessment of critically ill patients • Assisting in arterial puncture, ET tube intubation & extubation • ABG analysis & interpretation - respiratory acidosis, respiratory alkalosis, metabolic acidosis, metabolic alkalosis • Setting up of Ventilator modes and settings and care of patient on a ventilator • Set up of trolley with instruments • Monitoring and maintenance of Chest drainage system • Bag and mask ventilation • Assisting and maintenance of Central and peripheral lines invasive • Setting up of infusion pump, defibrillator, • Drug administration-infusion, intracardiac, intrathecal, epidural, • Monitoring pacemaker • ICU care bundle • Management of the dying patient in the ICU	• Hemodynamic monitoring • Different scales used in ICU • Communicating with critically ill patients	• Clinical evaluation • OSCE • RASS scale assessment • Use of VAE bundle VAP, CAUTI, BSI • Case Presentation

PROFESSIONALISM, PROFESSIONAL VALUES & ETHICS INCLUDING BIOETHICS**PLACEMENT: IV SEMESTER****THEORY: 1 Credit (20 hours)**

DESCRIPTION: This course is designed to help students to develop an understanding of professionalism and demonstrate professional behavior in their workplace with ethics and professional values. Further the students will be able to identify ethical issues in nursing practice and participate effectively in ethical decision making along with health team members.

COMPETENCIES: On completion of this course, the students will be able to

1. Describe profession and professionalism.
2. Identify the challenges of professionalism.
3. Maintain respectful communication and relationship with other health team members, patients and society.
4. Demonstrate professional conduct.
5. Describe various regulatory bodies and professional organizations related to nursing.
6. Discuss the importance of professional values in patient care.
7. Explain the professional values and demonstrate appropriate professional values in nursing practice.
8. Demonstrate and reflect on the role and responsibilities in providing compassionate care in the healthcare setting.
9. Demonstrate respect, human dignity and privacy and confidentiality to self, patients and their caregivers and other health team members.
10. Advocate for patients' wellbeing, professional growth and advancing the profession.
11. Identify ethical and bioethical concerns, issues and dilemmas in nursing and healthcare.
12. Apply knowledge of ethics and bioethics in ethical decision making along with health team members.
13. Protect and respect patient's rights.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	5 (T)	Discuss nursing as a profession Describe the concepts and attributes of professionalism Identify the challenges of professionalism Maintain respectful communication and relationship with other health team members, patients and society Demonstrate professional conduct Respect and maintain professional boundaries between patients, colleagues and society Describe the roles and responsibilities of regulatory bodies and professional organizations	PROFESSIONALISM Profession • Definition of profession • Criteria of a profession • Nursing as a profession Professionalism • Definition and characteristics of professionalism • Concepts, attributes and indicators of professionalism • <i>Challenges of professionalism</i> ◦ Personal identity vs professional identity ◦ Preservation of self-integrity: threat to integrity, Deceiving patient; withholding information and falsifying records ◦ Communication & Relationship with team members: Respectful and open communication and relationship pertaining to relevant interests for ethical decision making ◦ Relationship with patients and society Professional Conduct • Following ethical principles • Adhering to policies, rules and regulation of the institutions • Professional etiquettes and behaviours • Professional grooming: Uniform, Dress code • Professional boundaries: Professional relationship with the patients, caregivers and team members Regulatory Bodies & Professional Organizations: Roles & Responsibilities • <i>Regulatory bodies:</i> Indian Nursing Council, State Nursing Council • <i>Professional Organizations:</i> Trained Nurses Association of India (TNAI), Student Nurses Association (SNA), Nurses League of Christian Medical Association of India, International Council of Nurses (ICN) and International Confederation of Midwives	• Lecture cum Discussion • Debate • Role play • Case based discussion • Lecture cum Discussion • Visit to INC, SNC, TNAI	• Short answer • Essay • Objective type • Visit reports

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
II	5 (T)	Discuss the importance of professional values Distinguish between personal values and professional values Demonstrate appropriate professional values in nursing practice	PROFESSIONAL VALUES • Values: Definition and characteristics of values • Value clarification • Personal and professional values • Professional socialization: Integration of professional values with personal values Professional values in nursing • Importance of professional values in nursing and health care • Caring: definition, and process • Compassion: Sympathy Vs empathy, Altruism • Conscientiousness • Dedication/devotion to work • Respect for the person- Human dignity • Privacy and confidentiality: Incidental disclosure • Honesty and integrity: Truth telling • Trust and credibility: Fidelity, Loyalty • Advocacy: Advocacy for patients, work environment, nursing education and practice, and for advancing the profession	• Lecture cum Discussion • Value clarification exercise • Interactive learning • Story telling • Sharing experiences • Scenario based discussion	• Short answer • Essay • Assessment of student's behavior with patients and families
III	10 (T)	Define ethics & bioethics Explain ethical principles Identify ethical concerns Ethical issues and dilemmas in health care	ETHICS & BIOETHICS Definitions: Ethics, Bioethics and Ethical Principles • Beneficence • Non-maleficence: Patient safety, protecting patient from harm, Reporting errors • Justice: Treating each person as equal • Care without discrimination, equitable access to care and safety of the public • Autonomy: Respects patients' autonomy, Self-determination, Freedom of choice Ethical issues and ethical dilemma: Common ethical problems • Conflict of interest • Paternalism • Deception • Privacy and confidentiality	• Lecture cum discussion • Group discussion with examples • Flipping/ self-directed learning • Role play • Story telling • Sharing experiences • Case based Clinical discussion • Role modeling • Group exercise on ethical decision-making following steps on a given scenario • Assignment	• Short answer • Essay • Quiz • Reflective diary • Case report • Attitude test • Assessment of assignment

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Explain process of ethical decision making and apply knowledge of ethics and bioethics in making ethical decisions Explain code of ethics stipulated by ICN and INC	• Valid consent and refusal • Allocation of scarce nursing resources • Conflicts concerning new technologies • Whistle-blowing • <i>Beginning of life issues</i> ○ Abortion ○ Substance abuse ○ Fetal therapy ○ Selective deduction ○ Intrauterine treatment of fetal conditions ○ Mandated contraception ○ Fetal injury ○ Infertility treatment • <i>End of life issues</i> ○ End of life ○ Euthanasia ○ Do Not Resuscitate (DNR) • <i>Issues related to psychiatric care</i> ○ Non compliance ○ Restrain and seclusion ○ Refuse to take food		

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Discuss the rights of the patients and families to make decisions about health care Protect and respect patients' rights	Process of ethical decision making • Assess the situation (collect information) • Identify the ethical problem • Identify the alternative decisions • Choose the solution to the ethical decision • Implement the decision • Evaluate the decision Ethics committee: Roles and responsibilities • Clinical decision making • Research Code of Ethics • International Council of Nurses (ICN) • Indian Nursing Council Patients' Bill of Rights-17 patients' rights (MoH&FW, GoI) 1. Right to emergency medical care 2. Right to safety and quality care according to standards 3. Right to preserve dignity 4. Right to nondiscrimination 5. Right to privacy and confidentiality 6. Right to information 7. Right to records and reports 8. Right to informed consent 9. Right to second opinion 10. Right to patient education 11. Right to choose alternative treatment options if available 12. Right to choose source for obtaining medicines or tests 13. Right to proper referral and transfer, which is free from perverse commercial influences 14. Right to take discharge of patient or receive body of deceased from hospital 15. Right to information on the rates to be charged by the hospital for each type of service provided and facilities available on a prominent display board and a brochure 16. Right to protection for patients involved in clinical trials, biomedical and health research 17. Right to be heard and seek redressal		

CHILD HEALTH NURSING - I**PLACEMENT:** V SEMESTER**THEORY:** 3 Credits (60 hours)**PRACTICUM:** Lab/Skill Lab: 1 Credit (40 hours) Clinical: 2 Credits (160 hours)**DESCRIPTION:** This course is designed for developing an understanding of the modern approach to child-care, identification, prevention and nursing management of common health problems of neonates and children.**COMPETENCIES:** On completion of the course, the students will be able to

1. Develop understanding of the history and modern concepts of child health and child-care.
2. Explore the national child welfare services, national programs and legislation in the light of National Health Policy 2017.
3. Describe the role of preventive pediatrics and perform preventive measures towards accidents.
4. Participate in national immunization programs/Universal Immunization Program (UIP).
5. Identify the developmental needs of children and provide parental guidance.
6. Describe the principles of child health nursing and perform child health nursing procedures.
7. Demonstrate competencies in newborn assessment, planning and implementation of care to normal and high-risk newborn including neonatal resuscitation.
8. Apply the principles and strategies of Integrated management of neonatal and childhood illness (IMNCI).
9. Apply the knowledge of pathophysiology and provide nursing care to children with respiratory system disorders.
10. Identify and meet childhood emergencies and perform child CPR.

COURSE OUTLINE**T – Theory, L/SL – Lab/Skill Lab**

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	10 (T) 10 (L)	Explain the modern concept of child-care Describe National policy, programs and legislation in relation to child health & welfare Describe role of preventive pediatrics	Introduction: Modern concepts of child-care • Historical development of child health • Philosophy and modern concept of child-care • Cultural and religious considerations in child-care • National policy and legislations in relation to child health and welfare • National programs and agencies related to welfare services to the children • Internationally accepted rights of the child • Changing trends in hospital care, preventive, promotive and curative aspect of child health • <i>Preventive pediatrics:</i> ○ Concept ○ Immunization ○ Immunization programs and cold	• Lecture Discussion • Demonstration of common pediatric procedures	• Short answer • Objective type • Assessment of skills with checklist

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		List major causes of death during infancy, early & late childhood Differentiate between an adult and child in terms of illness and response Describe the major functions & role of the pediatric nurse in caring for a hospitalized child. Describe the principles of child health nursing and perform child health nursing procedures	chain. ○ Care of under-five and Under-five Clinics/Well-baby clinics ○ Preventive measures towards accidents • Child morbidity and mortality rates • Difference between an adult and child which affect response to illness ○ Physiological ○ Psychological ○ Social ○ Immunological • Hospital environment for sick child • Impact of hospitalization on the child and family • Communication techniques for children • Grief and bereavement • The role of a child health nurse in caring for a hospitalized child • Principles of pre and postoperative care of infants and children. <i>Child Health Nursing procedures:</i> • Administration of medication: oral, I/M, & I/V • Calculation of fluid requirement • Application of restraints • Assessment of pain in children. ○ FACES pain rating scale ○ FLACC scale ○ Numerical scale		
II	12 (T)	Describe the normal growth and development of children at different ages Identify the needs of children at different ages & provide parental guidance Identify the nutritional needs of children at different ages & ways	The Healthy Child • Definition and principles of growth and development • Factors affecting growth and development • Growth and development from birth to adolescence • Growth and developmental theories (Freud, Erickson, Jean Piaget, Kohlberg) • The needs of normal children through the stages of developmental and parental guidance	• Lecture Discussion • Demonstration • Developmental study of infant and children • Observation study of normal & sick child • Field visit to Anganwadi, child guidance clinic • Videos on breast feeding	• Short answer • Objective type • Assessment of field visits and developmental study reports

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		of meeting needs Identify the role of play for normal & sick children	- Nutritional needs of children and infants - breast feeding - exclusive breast feeding - Supplementary/artificial feeding and weaning - Baby friendly hospital concept - Types and value of play and selection of play material	Clinical practice/field	
III	15 (T) 20 (L)	Provide care to normal and high- risk neonates Perform neonatal resuscitation Recognize and manage common neonatal problems	Nursing care of neonate: - Appraisal of Newborn - Nursing care of a normal newborn/essential newborn care - Neonatal resuscitation - Nursing management of low birth weight baby - Kangaroo mother care - Nursing management of common neonatal disorder - Hyperbilirubinemia - Hypothermia - Hyperthermia - Metabolic disorder - Neonatal infections - Neonatal seizures - Respiratory distress syndrome - Retinopathy of Prematurity - Organization of neonatal care unit - Neonatal equipment	- Modular based teaching: ENBC and FBNC module (oral drills, videos, self-evaluation exercises) - Workshop on neonatal resuscitation: NRP module - Demonstration - Practice Session - Clinical practice - Lecture Discussion	- OSCE - Short answer - Objective type
IV	10 (T) 5 (L)	Apply principles and strategies of IMNCI	Integrated management of neonatal and childhood illnesses	<i>Modular based teaching:</i> IMNCI module Clinical practice/field	OSCE
V	8 (T)	Describe the etiology, pathophysiology, clinical manifestation and nursing management of children with disorders of respiratory, and endocrine system	Nursing management in common childhood diseases Respiratory system - Identification and Nursing management of congenital malformations - Congenital disorders: Tracheoesophageal fistula, Diaphragmatic hernia	- Lecture Discussion - Demonstration - Practice session - Clinical practice	- Short answer - Objective type - Assessment of skills with checklist

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Others: Acute naso-pharyngitis, Tonsillitis, Croup, Bronchitis, Bronchiolitis, Pneumonia, Asthma Endocrine system: - Juvenile Diabetes mellitus, Hypo-thyroidism		
VI	5 (T) 5 (L)	Develop ability to meet child- hood emergencies and perform child CPR	Childhood emergencies - Accidents – causes and prevention, Poisoning, Foreign bodies, Hemorrhage, Burns and Drowning - PLS (AHA Guidelines)	- Lecture - Discussion - Demonstration - PLS Module/ Workshop	OSCE

CHILD HEALTH NURSING - I & II CLINICAL (3 Credits – 240 hours)

PLACEMENT: V & VI SEMESTER

PRACTICUM: Skill Lab: 1 Credit (40 hours)

Clinical: V SEMESTER – 2 Credits (160 hours)

VI SEMESTER – 1 Credit (80 hours)

PRACTICE COMPETENCIES: On completion of the course, the students will be able to

1. Perform assessment of children: health, developmental & anthropometric.
2. Provide nursing care to children with various medical disorders.
3. Provide pre & postoperative care to children with common pediatric surgical conditions/ malformation.
4. Perform immunization as per NIS.
5. Provide nursing care to critically ill children.
6. Give health education/nutritional education to parents.
7. Counsel parents according to identified counseling needs.

Skill Lab

Use of Manikins and Simulators

PLS, CPAP, Endotracheal Suction

Pediatric Nursing Procedures:

- Administration of medication – Oral, IM & IV
- Oxygen administration
- Application of restraints
- Specimen collection
- Urinary catheterization and drainage
- Ostomy care
- Feeding – NG, gastrostomy, Jejunostomy
- Wound dressing
- Suture removal

CLINICAL POSTINGS

8 weeks × 30 hours per week (5 weeks + 3 weeks)

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Pediatric Medical Ward	V Sem – 2 weeks VI Sem – 1 week	Provide nursing care to children with various medical disorders	- Taking pediatric history - Physical examination & assessment of children - Administration of oral, I/M, & I/V medicine/fluids - Calculation of fluid replacement - Preparation of different strengths of I/V fluids - Application of restraints - Administration of O₂ inhalation by different methods - Baby bath/sponge bath - Feeding children by Katori spoon, Paladai cup - Collection of specimens for common investigations - Assisting with common diagnostic procedures - Teaching mothers/ parents - Malnutrition - Oral rehydration therapy - Feeding & Weaning - Immunization schedule - Play therapy	- Nursing care plan – 1 - Case study presentation – 1 - Health talk – 1	- Assess performance with rating scale - Assess each skill with checklist OSCE/OSPE - Evaluation of case study/ presentation & health education session - Completion of activity record
Pediatric Surgical Ward	V Sem – 2 weeks VI Sem – 1 week	- Recognize different pediatric surgical conditions/ malformations - Provide pre & post-operative care to children with common paediatric surgical conditions/ malformation - Counsel & educate parents	- Calculation, preparation & administration of I/V fluids - Bowel wash, insertion of suppositories - Care for ostomies: - Colostomy Irrigation - Ureterostomy - Gastrostomy - Enterostomy - Urinary catheterization & drainage - Feeding - Naso-gastric - Gastrostomy	- Nursing care plan – 1 - Case study/ presentation – 1	- Assess performance with rating scale - Assess each skill with checklist OSCE/OSPE - Evaluation of case study/ presentation - Completion of activity record

Clinical area/unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
			○ Jejunostomy ● Care of surgical wounds ○ Dressing ○ Suture removal		
Pediatric OPD/ Immunization room	V Sem – 1 week	● Perform assessment of children: health, developmental & anthropometric ● Perform immunization ● Give health education/ nutritional education	● Assessment of children ○ Health assessment ○ Developmental assessment ○ Anthropometric assessment ○ Nutritional assessment ● Immunization ● Health/Nutritional education	● Growth and developmental study: - Infant – 1 - Toddler – 1 - Preschooler – 1 - Schooler – 1 - Adolescent – 1	● Assess performance with rating scale ● Completion of activity record.
NICU & PICU	VI Sem – 1 week	● Provide nursing care to critically ill children	● Care of a baby in incubator/warmer ● Care of a child on ventilator, CPAP ● Endotracheal Suction ● Chest Physiotherapy ● Administration of fluids with infusion pumps ● Total Parenteral Nutrition ● Phototherapy ● Monitoring of babies ● Recording & reporting ● Cardiopulmonary Resuscitation (PLS)	● Newborn assessment – 1 ● Nursing Care Plan – 1	● Assess performance with rating scale ● Evaluation of observation report ● Completion of activity record

MENTAL HEALTH NURSING - I

PLACEMENT: V SEMESTER

THEORY: 3 Credits (60 hours)

PRACTICUM: Clinical: 1 Credit (80 hours)

DESCRIPTION: This course is designed to develop basic understanding of the principles and standards of mental health nursing and skill in application of nursing process in assessment and care of patients with mental health disorders.

COMPETENCIES: On completion of the course, the students will be competent to

1. Trace the historical development of mental health nursing and discuss its scope.
2. Identify the classification of the mental disorders.
3. Develop basic understanding of the principles and concepts of mental health nursing.

4. Apply the Indian Nursing Council practice standards for psychiatric mental health nursing in supervised clinical settings
5. Conduct mental health assessment.
6. Identify and maintain therapeutic communication and nurse patient relationship.
7. Demonstrate knowledge of the various treatment modalities and therapies used in mental disorders.
8. Apply nursing process in delivering care to patients with mental disorders.
9. Provide nursing care to patients with schizophrenia and other psychotic disorders based on assessment findings and treatment/therapies used.
10. Provide nursing care to patients with mood disorders based on assessment findings and treatment/therapies used
11. Provide nursing care to patients with neurotic disorders based on assessment findings and treatment/ therapies used.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
I	6 (T)	Describe the historical development & current trends in mental health nursing Discuss the scope of mental health nursing Describe the concept of normal & abnormal behaviour	Introduction - Perspectives of Mental Health and Mental Health Nursing, evolution of mental health services, treatments and nursing practices - Mental health team - Nature & scope of mental health nursing - Role & functions of mental health nurse in various settings and factors affecting the level of nursing practice - Concepts of normal and abnormal behaviour	Lecture cum Discussion	- Essay - Short answer
II	10 (T)	Define the various terms used in mental health Nursing Explain the classification of mental disorders Explain the psychodynamics of maladaptive behaviour Discuss the etiological factors & psychopathology of mental disorders Explain the principles and standards of Mental health Nursing Describe the conceptual models of mental health nursing	Principles and Concepts of Mental Health Nursing - Definition: mental health nursing and terminology used - Classification of mental disorders: ICD11, DSM5, Geropsychiatry manual classification - Review of personality development, defense mechanisms - Etiology bio-psycho-social factors - Psychopathology of mental disorders: review of structure and function of brain, limbic system and abnormal neurotransmission - Principles of Mental health Nursing - Ethics and responsibilities - Practice Standards for Psychiatric Mental Health Nursing (INC practice standards) - Conceptual models and the role of nurse: - Existential model	- Lecture cum Discussion - Explain using Charts - Review of personality development	- Essay - Short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			○ Psychoanalytical models ○ Behavioural model ○ Interpersonal model • Preventive psychiatry and rehabilitation		
III	6 (T)	Describe nature, purpose and process of assessment of mental health status	Mental Health Assessment • History taking • Mental status examination • Mini mental status examination • Neurological examination • Investigations: Related Blood chemistry, EEG, CT & MRI • Psychological tests	• Lecture cum Discussion • Demonstration • Practice session • Clinical practice	• Essay • Short answer • Assessment of mental health status
IV	6 (T)	Identify therapeutic communication & techniques Describe therapeutic relationship Describe therapeutic impasses and its interventions	Therapeutic Communication and Nurse-Patient Relationship • Therapeutic communication: Types, techniques, characteristics and barriers • Therapeutic nurse-patient relationship • Interpersonal relationship- • Elements of nurse patient contract, • Review of technique of IPR- Johari window • Therapeutic impasse and its management	• Lecture cum Discussion • Demonstration • Role Play • Process recording • Simulation (video)	• Essay • Short answer • OSCE
V	10 (T)	Explain treatment modalities and therapies used in mental disorders and role of the nurse	Treatment modalities and therapies used in mental disorders • Physical therapies: Psychopharmacology, • Electro Convulsive therapy • Psychological Therapies: Psychotherapy, Behaviour therapy, CBT • Psychosocial: Group therapy, Family therapy, Therapeutic Community, Recreational therapy, Art therapy (Dance, Music etc), Occupational therapy • Alternative & Complementary: Yoga, Meditation, Relaxation • Consideration for special populations	• Lecture cum Discussion • Demonstration • Group work • Practice session • Clinical practice	• Essay • Short answer • Objective type
VI	8 (T)	Describe the etiology, psycho-dynamics/ pathology, clinical manifestations, diagnostic criteria and management of patients with Schizophrenia, and other psychotic disorders	Nursing management of patient with Schizophrenia, and other psychotic disorders • Prevalence and incidence • Classification • Etiology, psychodynamics, clinical manifestation, diagnostic criteria/formulations	• Lecture and Discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			Nursing process • Nursing Assessment: History, Physical and mental assessment • Treatment modalities and nursing management of patients with Schizophrenia and other psychotic disorders • Geriatric considerations and considerations for special populations • Follow up and home care and rehabilitation		
VII	6 (T)	Describe the etiology, psycho-dynamics, clinical manifestations, diagnostic criteria and management of patients with mood disorders	Nursing management of patient with mood disorders • Prevalence and incidence • Mood disorders: Bipolar affective disorder, mania depression and dysthymia etc. • Etiology, psycho dynamics, clinical manifestation, diagnosis • Nursing Assessment History, Physical and mental assessment • Treatment modalities and nursing management of patients with mood disorders • Geriatric considerations/ considerations for special populations • Follow-up and home care and rehabilitation	• Lecture and Discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems
VIII	8 (T)	Describe the etiology, psycho-dynamics, clinical manifestations, diagnostic criteria and management of patients with neurotic, stress related and somatization disorders	Nursing management of patient with neurotic, stress related and somatisation disorders • Prevalence and incidence • classifications • Anxiety disorders – OCD, PTSD, Somatoform disorders, Phobias, Disassociative and Conversion disorders • Etiology, psychodynamics, clinical manifestation, diagnostic criteria/ formulations • Nursing Assessment: History, Physical and mental assessment • Treatment modalities and nursing management of patients with neurotic and stress related disorders • Geriatric considerations/ considerations for special populations • Follow-up and home care and rehabilitation	• Lecture and Discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems

CLINICAL PRACTICUM
MENTAL HEALTH NURSING - I & II

PLACEMENT: SEMESTER V & VI

MENTAL HEALTH NURSING - I – 1 Credit (80 hours)

MENTAL HEALTH NURSING - II – 2 Credits (160 hours)

PRACTICE COMPETENCIES: On completion of the course, the students will be able to:

1. Assess patients with mental health problems/disorders
2. Observe and assist in various treatment modalities or therapies
3. Counsel and educate patients and families
4. Perform individual and group psychoeducation
5. Provide nursing care to patients with mental health problems/disorders
6. Motivate patients in the community for early treatment and follow up
7. Observe the assessment and care of patients with substance abuse disorders in deaddiction centre.

CLINICAL POSTINGS

(8 weeks × 30 hours per week = 240 hours)

Clinical Area/Unit	Duration (Weeks)	Learning Outcomes	Skills/Procedural Competencies	Clinical Requirements	Assessments Methods
Psychiatric OPD	2	- Assess patients with mental health problems - Observe and assist in therapies - Counsel and educate patients, and families	- History taking - Perform mental status examination (MSE) - Observe/practice Psychometric assessment - Perform Neurological examination - Observing and assisting in therapies - Individual and group psycho-education - Mental hygiene practice education - Family psycho-education	- History taking and Mental status examination – 2 - Health education – 1 - Observation report of OPD	- Assess performance with rating scale - Assess each skill with checklist - Evaluation of health education - Assessment of observation report - Completion of activity record
Child Guidance clinic	1	- Assess children with various mental health problems - Counsel and educate children, families and significant others	- History & mental status examination - Observe/practice psychometric assessment - Observe and assist in various therapies - Parental teaching for child with mental deficiency	- Case work – 1 - Observation report of different therapies – 1	- Assess performance with rating scale - Assess each skill with checklist - Evaluation of the observation report
Inpatient ward	4	- Assess patients with mental health problems - Provide nursing care for patients with various	- History taking - Mental status examination (MSE) - Neurological examination - Assisting in psychometric	- Give care to 2-3 patients with various mental disorders - Case study – 1	- Assess performance with rating scale - Assess each skill with checklist

Clinical Area/Unit	Duration (Weeks)	Learning Outcomes	Skills/Procedural Competencies	Clinical Requirements	Assessments Methods
		mental health problems • Assist in various therapies • Counsel and educate patients, families and significant others	assessment • Recording therapeutic communication • Administration of medications • Assist Electro-Convulsive Therapy (ECT) • Participating in all therapies • Preparing patients for Activities of Daily Living (ADL) • Conducting admission and discharge counselling • Counseling and teaching patients and families	• Care plan • Clinical presentation – 1 • Process recording – 2 • Maintain drug book	• Evaluation of the case study, care plan, clinical presentation, process recording • Completion of activity record
Community psychiatry & Deaddiction centre	1	• Identify patients with various mental disorders • Motivate patients for early treatment and follow up • Assist in follow up clinic • Counsel and educate patient, family and community • Observe the assessment and care of patients at deaddiction centre	• Conduct home visit and case work • Identifying individuals with mental health problems • Assisting in organizations of Mental Health camp • Conducting awareness meetings for mental health & mental illness • Counseling and Teaching family members, patients and community • Observing deaddiction care	• Case work – 1 • Observation report on field visits • Visit to deaddiction centre	• Assess performance with rating scale • Evaluation of case work and observation report • Completion of activity record

COMMUNITY HEALTH NURSING - I
including Environmental Science & Epidemiology

PLACEMENT: V SEMESTER

THEORY: 5 Credits (100 hours) includes Lab hours also

PRACTICUM: Clinical: 2 Credits (160 hours)

DESCRIPTION: This course is designed to help students develop broad perspectives of health, its determinants, about community health nursing and understanding about the health care delivery services, health care policies and regulations in India. It helps the students to develop knowledge and understanding of environmental science. It further helps them to apply the principles and concepts of BCC and health education for health promotion and maintenance of health within the community in wellness and illness continuum. It helps students to practice Community Health Nursing for the individuals, family and groups at rural, urban and tribal settings by applying principles of community health nursing and epidemiological approach. It also helps the students to develop knowledge and competencies required to screen, assess, diagnose, manage and refer clients appropriately in various health care settings. It prepares the students to provide primary healthcare to clients of all ages in the community, DH, PHC, CHC, SC/HWC and develop beginning skills in participating in all the National Health Programs.

COMPETENCIES: On completion of the course, the students will be able to

1. Explore the evolution of public health in India and community health nursing
2. Explain the concepts and determinants of health
3. Identify the levels of prevention and health problems of India
4. Develop basic understanding about the health care planning and the present health care delivery system in India at various levels
5. Locate the significance of primary health care and comprehensive primary health care as part of current health care delivery system focus
6. Discuss health care policies and regulations in India
7. Demonstrate understanding about an overview of environmental science, environmental health and sanitation
8. Demonstrate skill in nutritional assessment for different age groups in the community and provide appropriate nutritional counseling
9. Provide health education to individuals and families applying the principles and techniques of behavior change appropriate to community settings
10. Describe community health nursing approaches and concepts
11. Describe the role and responsibilities of community health nursing personnel
12. Utilize the knowledge and skills in providing comprehensive primary health care across the life span at various settings
13. Make effective home visits applying principles and methods used for home visiting
14. Use epidemiological approach in community diagnosis
15. Utilize the knowledge of epidemiology, epidemiological approaches in caring for people with communicable and non-communicable diseases
16. Investigate an epidemic of communicable diseases
17. Assess, diagnose, manage and refer clients for various communicable and non-communicable diseases appropriately at the primary health care level
18. Identify and perform the roles and responsibilities of nurses in implementing various national health programs in the community for the prevention, control and management of communicable and non-communicable diseases particularly in screening, identification, primary management and referral to a health facility/First Referral Unit (FRU)

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
1	4 (T)	Define public health, community health and community health nursing Explain the evolution of public health in India and scope of community health nursing Explain various concepts of health and disease, dimensions and determinants of health Explain the natural history of disease and levels of prevention Discuss the health	Concepts of Community Health and Community Health Nursing • Definition of public health, community health and community health nursing • Public health in India and its evolution and Scope of community health nursing • Review: Concepts of Health & Illness/ disease: Definition, dimensions and determinants of health and disease • Natural history of disease • Levels of prevention: Primary, Secondary &	• Lecture • Discussion • Explain using chart, graphs • Community needs assessment (Field survey on identification of demographic characteristics, health determinants and resources of a rural and an urban community) • Explain using examples	• Short answer • Essay • Objective type • Survey report

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		problems of India	tertiary prevention – Review • Health problems (Profile) of India		
II	8 (T)	Describe health planning and its steps, and various health plans, and committees Discuss health care delivery system in India at various levels Describe SDGs, primary health care and comprehensive primary health care (CPHC) Explain health care policies and regulations in India	Health Care Planning and Organization of Health Care at various levels • Health planning steps • Health planning in India: various committees and commissions on health and family welfare and Five Year plans • Participation of community and stakeholders in health planning • Health care delivery system in India: Infrastructure and Health sectors, Delivery of health services at sub-centre (SC), PHC, CHC, District level, state level and national level • Sustainable development goals (SDGs), Primary Health Care and Comprehensive Primary Health Care (CPHC): elements, principles • CPHC through SC/Health Wellness Center (HWC) • Role of MLHP/CHP • National Health Care Policies and Regulations ◦ National Health Policy (1983, 2002, 2017) ◦ National Health Mission (NHM): National Rural Health Mission (NRHM), National Urban Health Mission (NUHM), NHM ◦ National Health Protection Mission (NHPM) ◦ Ayushman Bharat ◦ Universal Health Coverage	• Lecture • Discussion • Field visits to CHC, PHC, SC/Health Wellness Centers (HWC) • Directed reading	• Short answer • Essay • Evaluation of Field visit reports & presentation
III	15 (T)	Identify the role of an individual in the	Environmental Science, Environmental Health, and	• Lecture	• Short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		conservation of natural resources	Sanitation • <i>Natural resources:</i> Renewable and non-renewable resources, natural resources and associated problems: Forest resources, water resources, mineral resources, food resources, energy resources and land resources • Role of individuals in conservation of natural resources, and equitable use of resources for sustainable lifestyles • <i>Ecosystem:</i> Concept, structure and functions of ecosystems, Types & Characteristics – Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystem, Energy flow in ecosystem • <i>Biodiversity:</i> Classification, value of bio-diversity, threats to biodiversity, conservation of biodiversity • <i>Environmental pollution:</i> Introduction, causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, nuclear hazards & their impact on health • <i>Climate change, global warming:</i> ex. heat wave, acid rain, ozone layer depletion, waste land reclamation & its impact on health • <i>Social issues and environment:</i> sustainable development, urban problems related to energy, water and environmental ethics • Acts related to environmental protection and preservation	• Discussion • Debates on environmental protection and preservation • Explain using Charts, graphs, Models, films, slides • Directed reading • Visits to water supply & purification sites	• Essay • Field visit reports
		Describe ecosystem, its structure, types and functions			
		Explain the classification, value and threats to biodiversity			
		Enumerate the causes, effects and control measures of environmental pollution			
		Discuss about climate change, global warming, acid rain, and ozone layer depletion			
		Enumerate the role of an individual in creating awareness about the social issues related to environment			
			Environmental Health &		

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		List the Acts related to environmental protection and preservation Describe the concept of environmental health and sanitation Describe water conservation, rain water harvesting and water shed management Explain waste management	Sanitation • Concept of environment health and sanitation • Concept of safe water, sources of water, waterborne diseases, water purification processes, household purification of water • Physical and chemical standards of drinking water quality and tests for assessing bacteriological quality of water • Concepts of water conservation: rain water harvesting and water shed management • Concept of Pollution prevention • Air & noise pollution • Role of nurse in prevention of pollution • Solid waste management, human excreta disposal & management and sewage disposal and management • Commonly used insecticides and pesticides	• Observe rain water harvesting plants • Visit to sewage disposal and treatment sites, and waste disposal sites	
IV	7 (T)	Describe the various nutrition assessment methods at the community level Plan and provide diet plans for all age groups including therapeutic diet Provide nutrition counseling and education to all age groups and describe	Nutrition Assessment and Nutrition Education • <i>Review of Nutrition</i> ◦ Concepts, types ◦ Meal planning: aims, steps & diet plan for different age groups ◦ Nutrition assessment of individuals, families and community by using appropriate methods • Planning suitable diet for individuals and families according to local availability of foods, dietary habits and economic status • General nutritional advice • Nutrition education: purpose, principles & methods and Rehabilitation	• Lecture • Discussion • Demonstration • Role play • Market visit • Nutritional assessment for different age groups • Lecture • Discussion	• Performance assessment of nutrition assessment for different age groups • Evaluation on nutritional assessment reports • Short answer • Essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		the national nutrition programs and Identify early the food borne diseases, and perform initial management and referral appropriately	• Review: Nutritional deficiency disorders • National nutritional policy & programs in India Food Borne Diseases and Food Safety Food borne diseases • Definition, & burden, Causes and classification • Signs & Symptoms • Transmission of food borne pathogens & toxins • Early identification, initial management and referral Food poisoning & food intoxication • Epidemiological features/clinical characteristics, Types of food poisoning • Food intoxication-features, preventive & control measures • Public health response to food borne diseases	• Field visits to milk purification plants, slaughterhouse • Refer Nutrition module-BPCCIN Block 2-unit 1 & UNIT 5	• Field visit reports
V	6 (T)	Describe behaviour change communication skills Counsel and provide health education to individuals, families and community for promotion of healthy life style practices	Communication management and Health Education • Behaviour change communication skills ○ communication ○ Human behaviour ○ Health belief model: concepts & definition, ways to influence behaviour ○ Steps of behaviour change ○ Techniques of behaviour change: Guiding principles in planning BCC activity ○ Steps of BCC ○ Social and Behaviour Change Communication strategies (SBCC): techniques to collect social history from clients ○ Barriers to effective	• Lecture • Discussion • Role play • Demonstration: BCC skills • Supervised field practice • Refer: BCC/SBCC module (MoHFW & USAID)	• Short answer • Essay • Performance evaluation of health

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		using appropriate methods and media	communication, and methods to overcome them • Health promotion and Health education: methods/techniques, and audio-visual aids		education sessions to individuals and families
VI	7 (T)	Describe community health nursing approaches and concepts Describe and identify the activities of community health nurse to promote and maintain family health through home visits	Community health nursing approaches, concepts, roles and responsibilities of community health nursing personnel • <i>Approaches:</i> ○ Nursing process ○ Epidemiological approach ○ Problem solving approach ○ Evidence based approach ○ Empowering people to care for themselves • <i>Review:</i> Primary health care and Comprehensive Primary Health Care (CPHC) Home Visits: • Concept, Principles, Process, & Techniques: Bag technique • Qualities of Community Health Nurse • Roles and responsibilities of community health nursing personnel in family health services • <i>Review:</i> Principles & techniques of counseling	• Lecture • Discussion • Demonstration • Role plays • Supervised field practice	• Short answer • Essays • Assessment of supervised field practice
VII	10 (T)	Explain the specific activities of community health nurse in assisting individuals and groups to promote and maintain their health	Assisting individuals and families to promote and maintain their health <i>A. Assessment of individuals and families</i> (Review from Child health nursing, Medical surgical nursing and OBG Nursing) • Assessment of children, women, adolescents, elderly etc.	• Lecture • Discussion • Demonstration • Role plays	• Short answer • Essay • Assessment of clinical performance in the field practice area

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			• Children: Monitoring growth and development, milestones • Anthropometric measurements, BMI • Social development • Temperature and Blood pressure monitoring • Menstrual cycle • Breast self-examination (BSE) and testicles self-examination (TSE) • Warning Signs of various diseases • Tests: Urine for sugar and albumin, blood sugar, Hemoglobin <i>B. Provision of health services/primary health care:</i> • Routine check-up, Immunization, counseling, and diagnosis • Management of common diseases at home and health centre level ◦ Care based on standing orders/protocols approved by MoH&FW ◦ Drugs dispensing and injections at health centre <i>C. Continue medical care and follow up in community for various diseases/disabilities</i> <i>D. Carry out therapeutic procedures as prescribed/required for client and family</i> <i>E. Maintenance of health records and reports</i> • Maintenance of client records • Maintenance of health records at the facility level • Report writing and documentation of activities carried out during home visits, in the clinics/centers and field visits		• Assessment of procedural skills in lab procedures • Evaluation of records and reports
		Provide primary care at home/ health centers (HWC) using standing orders/ protocols as per public health standards/approved by MoH&FW and INC regulation Develop skill in maintenance of records and reports		• Document and maintain: • Individual records	

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		Develop beginning skills in handling social issues affecting the health and development of the family Identify and assist the families to utilize the community resources appropriately	<i>F. Sensitize and handle social issues affecting health and development of the family</i> • Women empowerment • Women and child abuse • Abuse of elders • Female foeticide • Commercial sex workers • Substance abuse <i>G. Utilize community resources for client and family</i> • Trauma services • Old age homes • Orphanages • Homes for physically challenged individuals • Homes for destitute • Palliative care centres • Hospice care centres • Assisted living facility	• Family records • Health center records • Field visits	• Evaluation of field visit reports
VIII	10 (T)	Describe the concepts, approaches and methods of epidemiology	Introduction to Epidemiology – Epidemiological Approaches and Processes • Epidemiology: Concept and Definition • Distribution and frequency of disease • Aims & uses of epidemiology • Epidemiological models of causation of disease • Concepts of disease transmission • Modes of transmission: Direct, Indirect and chain of infection • Time trends or fluctuations in disease occurrence • Epidemiological approaches: Descriptive, analytical and experimental • Principles of control measures/levels of	• Lecture • Discussion • Demonstration • Role play • Field visits: communicable disease hospital & Entomology office • Investigation of an epidemic of	• Short answer • Essay • Report on visit to communicable disease hospital • Report on visit to entomology office

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		Investigate an epidemic of communicable disease	prevention of disease - Investigation of an epidemic of communicable disease - Use of basic epidemiological tools to make community diagnosis for effective planning and intervention	communicable disease	Report and presentation on investigating an epidemic of communicable disease
IX	15 (T)	Explain the epidemiology of specific communicable diseases Describe the various methods of prevention, control and management of communicable diseases and the role of nurses in screening, diagnosing, primary management and referral to a health facility	Communicable Diseases and National Health Programs <i>1. Communicable Diseases – Vector borne diseases (Every disease will be dealt under the following headlines)</i> - Epidemiology of the following vector born diseases - Prevention & control measures - Screening, and diagnosing the following conditions, primary management, referral and follow up - Malaria - Filaria - Kala-azar - Japanese encephalitis - Dengue - Chickungunya <i>2. Communicable diseases: Infectious diseases (Every disease will be dealt under the following headlines)</i> - Epidemiology of the following infectious diseases - Prevention & Control measures - Screening, diagnosing the following conditions, primary management, referral and follow up - Leprosy - Tuberculosis - Vaccine preventable diseases – Diphtheria, whooping cough, tetanus, poliomyelitis	- Lecture - Discussion, - Demonstration - Role play - Suggested field visits - Field practice - Assessment of clients with communicable diseases	- Field visit reports - Assessment of family case study - OSCE assessment - Short answer - Essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		Identify the national health programs relevant to communicable diseases and explain the role of nurses in implementation of these programs	and measles ○ Enteric fever ○ Viral hepatitis ○ HIV/AIDS/RTI infections ○ HIV/AIDS, and Sexually Transmitted Diseases/ Reproductive tract infections (STIs/RTIs) ○ Diarrhoea ○ Respiratory tract infections ○ COVID-19 ○ Helminthic – soil & food transmitted and parasitic infections – Scabies and pediculosis 3. Communicable diseases: Zoonotic diseases • Epidemiology of Zoonotic diseases • Prevention & control measures • Screening and diagnosing the following conditions, primary management, referral and follow up ○ Rabies: Identify, suspect, primary management and referral to a health facility • Role of a nurses in control of communicable diseases National Health Programs 1. UIP: Universal Immunization Program (Diphtheria, Whooping cough, Tetanus, Poliomyelitis, Measles and Hepatitis B) 2. National Leprosy Eradication Program (NLEP) 3. Revised National Tuberculosis Control Program (RNTCP) 4. Integrated Disease Surveillance Program (IDSP): Enteric fever, Diarrhea, Respiratory		

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			infections and Scabies 5. National Aids Control Organization (NACO) 6. National Vector Borne Disease Control Program 7. National Air Quality Monitoring Program 8. Any other newly added program		
X	15 (T)	Describe the national health program for the control of non-communicable diseases and the role of nurses in screening, identification, primary management and referral to a health facility	Non-Communicable Diseases and National Health Program (NCD) - National response to NCDs (Every disease will be dealt under the following headlines) - Epidemiology of specific diseases - Prevention and control measures - Screening, diagnosing/identification and primary management, referral and follow up care NCD-1 - Diabetes Mellitus - Hypertension - Cardiovascular diseases - Stroke & Obesity Blindness: Categories of visual impairment and national program for control of blindness Deafness: national program for prevention and control of deafness Thyroid diseases Injury and accidents: Risk factors for Road traffic injuries and operational guidelines for trauma care facility on highways NCD-2 Cancers - Cervical Cancer - Breast Cancer - Oral cancer - Epidemiology of specific cancers, Risk factors/	- Lecture - Discussion - Demonstration - Role play - Suggested field visits - Field practice - Assessment of clients with non-communicable diseases	- Field visit reports - Assessment of family case study - OSCE assessment - Short answer - Essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			Causes, Prevention, Screening, diagnosis – signs, Signs & symptoms, and early management & referral o Palliative care o Role of a nurse in non-communicable disease control program National Health Programs - National program for prevention and control of cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) - National program for control of blindness - National program for prevention and control of deafness - National tobacco control program - Standard treatment protocols used in National Health Programs	Participation in national health programs	
XI	3 (T)	Enumerate the school health activities and the role functions of a school health nurse	School Health Services - Objectives - Health problems of school children - Components of school health services - Maintenance of school health records - Initiation and planning of school health services - Role of a school health nurse	- Lecture - Discussion - Demonstration - Role play - Suggested field visits - Field practice	- Short answer - Essay - Evaluation of health counseling to school children - Screen, diagnose, manage and refer school children - OSCE assessment

Note: Lab hours less than 1 Credit is not specified separately.

CLINICAL PRACTICUM

CLINICAL: 2 Credits (160 hours)

CLINICAL POSTINGS: (4 weeks × 40 hours per week)

Clinical Area/Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Urban	2 weeks	Build and maintain rapport	Interviewing skills using communication and	Community needs assessment/ Survey	Evaluation of survey report

Clinical Area/Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Rural	2 Weeks	Identify the socio-demographic characteristics, health determinants and resources of a rural and an urban community Observe the functioning and document significant observations Perform nutritional assessment and plan diet plan for adult Educate individuals/family/community on - Nutrition - Hygiene - Food hygiene - Healthy lifestyle - Health promotion Perform health assessment for clients of various age groups Maintain records and reports	interpersonal relationship • Conducting community needs assessment/survey to identify health determinants of a community • Observation skills • Nutritional assessment skills • Skill in teaching individual/family on: ○ Nutrition, including food hygiene and safety ○ Healthy lifestyle ○ Health promotion • Health assessment including nutritional assessment for clients of different age groups • Documentation skills	– Rural/urban – 1 Field visits: • SC/HWC, PHC, CHC • Water resources & purification site – water quality standards • Rain water harvesting • Sewage disposal Observation of • milk dairy • slaughterhouse – meat hygiene • Observation of nutrition programs • Visit to market • Nutritional assessment of an individual (adult) – 1 • Health teaching (Adult) – 1 • Use of audio-visual aids ○ Flash cards ○ Posters ○ Flannel graph ○ Flip charts • Health assessment of woman – 1, infant/under five – 1, adolescent – 1, adult – 1 • Growth monitoring of under-five children – 1 Document and maintain: • Individual record • Family record • Health center record • Community health survey to investigate an epidemic – 1	• Evaluation of field visit and observation reports • Health talk evaluation • Assessment of clinical performance • Evaluations of reports &

Clinical Area/Unit	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
		Investigate epidemic of communicable disease Identify prevalent communicable and non-communicable diseases Screen, diagnose, manage and refer clients with common health problems in the community and refer high risk clients using standing orders/protocols Participate in implementation of national health programs Participate in school health program	- Investigating an epidemic – Community health survey - Screening, diagnosing, primary management of common health problems in the community and referral of high-risk clients to FRUs - Conduct home visit - Participation in implementation of national health programs - Participation in school health program	Screening, diagnosing and primary management and referral: - Communicable disease – 1 - Non- communicable diseases – 1 - Home visits – 2 - Participation in any two national health programs - Participation in school health program – 1	records - Clinical performance assessment - OSCE - Final clinical examination - Evaluation of home visit

EDUCATIONAL TECHNOLOGY/NURSING EDUCATION

PLACEMENT: V SEMESTER

THEORY: 2 Credits (40 hours)

PRACTICUM: Lab/Practical: 1 Credit (40 hours)

DESCRIPTION: This course is designed to help the students to develop knowledge, attitude and beginning competencies essential for applying basic principles of teaching and learning among individuals and groups both in educational and clinical settings. It also introduces basics of curriculum planning and organization. It further enables students to participate actively in team and collaborative learning.

COMPETENCIES: On completion of the course, the students will be competent to

1. Develop basic understanding of theoretical foundations and principles of teaching and learning
2. Identify the latest approaches to education and learning
3. Initiate self- assessment to identify one's own learning styles
4. Demonstrate understanding of various teaching styles that can be used, based on the learners' readiness and generational needs
5. Develop understanding of basics of curriculum planning, and organizing
6. Analyze and use different teaching methods effectively that are relevant to student population and settings
7. Make appropriate decisions in selection of teaching learning activities integrating basic principles

8. Utilize active learning strategies that enhance critical thinking, team learning and collaboration
9. Engage in team learning and collaboration through inter professional education
10. Integrate the principles of teaching and learning in selection and use of educational media/technology
11. Apply the principles of assessment in selection and use of assessment and evaluation strategies
12. Construct simple assessment tools/tests integrating cognitive, psychomotor and affective domains of learning that can measure knowledge and competence of students
13. Develop basic understanding of student guidance through mentoring and academic advising
14. Identify difficult situations, crisis and disciplinary/grievance issues experienced by students and provide appropriate counseling
15. Engage in ethical practice in educational as well as clinical settings based on values, principles and ethical standards
16. Develop basic understanding of evidence-based teaching practices

COURSE OUTLINE

T – Theory, P – Practical (Laboratory)

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
I	6	3	Explain the definition, aims, types, approaches and scope of educational technology Compare and contrast the various educational philosophies Explain the teaching learning process, nature, characteristics and principles	Introduction and Theoretical Foundations: <i>Education and educational technology</i> • Definition, aims • Approaches and scope of educational technology • Latest approaches to education: ○ Transformational education ○ Relationship based education ○ Competency based education <i>Educational philosophy:</i> • Definition of philosophy, education and philosophy • Comparison of educational philosophies • Philosophy of nursing education <i>Teaching learning process:</i> • Definitions • Teaching learning as a process • Nature and characteristics of teaching and learning • Principles of teaching and learning • Barriers to teaching and learning • Learning theories • Latest approaches to learning ○ Experiential learning	• Lecture cum discussion	• Quiz

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			Describe different methods/strategies of teaching and develop beginning skill in using various teaching methods Explain active learning strategies and participate actively in team and collaborative learning	o Information communication technology (ICT) – ICT used in education <i>Teaching methods – Features, advantages and disadvantages</i> • Lecture, Group discussion, microteaching • Skill lab – simulations, Demonstration & re-demonstration • Symposium, panel discussion, seminar, scientific workshop, exhibitions • Role play, project • Field trips • Self-directed learning (SDL) • Computer assisted learning • One-to-one instruction <i>Active learning strategies</i> • Team based learning • Problem based learning • Peer sharing • Case study analysis • Journaling • Debate • Gaming • Inter-professional education	• Practice teaching/Micro teaching • Exercise (Peer teaching) • Patient teaching session • Construction of game – puzzle • Teaching in groups – interdisciplinary	• Assessment of microteaching
IV	3	3	Enumerate the factors influencing selection of clinical learning experiences Develop skill in using different clinical teaching strategies	Teaching in the Clinical Setting – Teaching Methods • Clinical learning environment • Factors influencing selection of clinical learning experiences • Practice model • Characteristics of effective clinical teacher • Writing clinical learning outcomes/practice competencies • Clinical teaching strategies – patient assignment – clinical conference, clinical presentation/bedside clinic, Case study/care study, nursing rounds, concept mapping, project, debate, game, role play, PBL, questioning, written assignment, process recording	• Lecture cum discussion • Writing clinical outcomes – assignments in pairs	• Short answer • Assessment of written assignment

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
V	5	5	Explain the purpose, principles and steps in the use of media Categorize the different types of media and describe its advantages and disadvantages Develop skill in preparing and using media	Educational/Teaching Media - Media use – Purpose, components, principles and steps - Types of media <i>Still visuals</i> - Non projected – drawings & diagrams, charts, graphs, posters, cartoons, board devices (chalk/white board, bulletin board, flannel board, flip charts, flash cards, still pictures/photographs, printed materials-handout, leaflet, brochure, flyer - Projected – film stripes, microscope, power point slides, overhead projector <i>Moving visuals</i> - Video learning resources – videotapes & DVD, blu-ray, USB flash drive - Motion pictures/films <i>Realia and models</i> - Real objects & Models <i>Audio aids/audio media</i> - Audiotapes/Compact discs - Radio & Tape recorder - Public address system - Digital audio <i>Electronic media/computer learning resources</i> - Computers - Web-based videoconferencing - E-learning, Smart classroom <i>Telecommunication (Distance education)</i> - Cable TV, satellite broadcasting, videoconferencing Telephones – Telehealth/telenursing <i>Mobile technology</i>	- Lecture cum discussion - Preparation of different teaching aids – (Integrate with practice teaching sessions)	- Short answer - Objective type - Assessment of the teaching media prepared
VI	5	3	Describe the purpose, scope, principles in selection of evaluation methods and barriers to evaluation Explain the guidelines to develop assessment	Assessment/Evaluation Methods/Strategies - Purposes, scope and principles in selection of assessment methods and types - Barriers to evaluation - Guidelines to develop assessment	Lecture cum discussion	- Short answer - Objective type

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			tests Develop skill in construction of different tests Identify various clinical evaluation tools and demonstrate skill in selected tests	tests <i>Assessment of knowledge:</i> • Essay type questions, • Short answer questions (SAQ) • Multiple choice questions (MCQ – single response & multiple response) <i>Assessment of skills:</i> • Clinical evaluation • Observation (checklist, rating scales, videotapes) • Written communication – progress notes, nursing care plans, process recording, written assignments • Verbal communication (oral examination) • Simulation • Objective Structured Clinical Examination (OSCE) • Self-evaluation • Clinical portfolio, clinical logs <i>Assessment of Attitude:</i> • Attitude scales <i>Assessment tests for higher learning</i> • Interpretive questions, hot spot questions, drag and drop and ordered response questions	• Exercise on constructing assessment tool/s	• Assessment of tool/s prepared
VII	3	3	Explain the scope, purpose and principles of guidance Differentiate between guidance and counseling Describe the principles, types, and counseling process Develop basic skill of counseling and guidance	Guidance/academic advising, counseling and discipline <i>Guidance</i> • Definition, objectives, scope, purpose and principles • Roles of academic advisor/ faculty in guidance <i>Counseling</i> • Difference between guidance and counseling • Definition, objectives, scope, principles, types, process and steps of counseling • Counseling skills/techniques – basics • Roles of counselor • Organization of counseling services	• Lecture cum discussion • Role play on student counseling in different situations • Assignment on identifying situations requiring counseling	• Assessment of performance in role play scenario • Evaluation of assignment

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			Recognize the importance of preventive counseling and develop skill to respond to disciplinary problems and grievance among students	- Issues for counseling nursing students <i>Discipline and grievance in students</i> - Managing disciplinary/grievance problems – preventive guidance & counseling - Role of students' grievance redressal cell/committee		
VIII	4	2	Recognize the importance of value-based education Develop skill in ethical decision making and maintain ethical standards for students Introduce knowledge of EBT and its application in nursing education	Ethics and Evidence Based Teaching (EBT) in Nursing Education <i>Ethics – Review</i> - Definition of terms - Value based education in nursing - Value development strategies - Ethical decision making - Ethical standards for students - Student-faculty relationship <i>Evidence based teaching – Introduction</i> - Evidence based education process and its application to nursing education	- Value clarification exercise - Case study analysis (student encountered scenarios) and suggest ethical decision-making steps - Lecture cum discussion	- Short answer - Evaluation of case study analysis - Quiz – MCQ

INTRODUCTION TO FORENSIC NURSING AND INDIAN LAWS

PLACEMENT: V SEMESTER

THEORY: 1 Credit (20 hours)

DESCRIPTION: This course is designed to help students to know the importance of forensic science in total patient care and to recognize forensic nursing as a specialty discipline in professional nursing practice.

COMPETENCIES: On completion of the course, the students will be able to

1. Identify forensic nursing as an emerging specialty in healthcare and nursing practice
2. Explore the history and scope of forensic nursing practice
3. Identify forensic team, role and responsibilities of forensic nurse in total care of victim of violence and in preservation of evidence
4. Develop basic understanding of the Indian judicial system and legal procedures

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	3 (T)	Describe the nature of forensic science and discuss issues concerning violence	Forensic Science • Definition • History • Importance in medical science • Forensic Science Laboratory Violence • Definition • Epidemiology • Source of data Sexual abuse – child and women	• Lecture cum discussion • Visit to Regional Forensic Science Laboratory	• Quiz – MCQ • Write visit report
II	2 (T)	Explain concepts of forensic nursing and scope of practice for forensic nurse	Forensic Nursing • Definition • History and development • Scope – setting of practice, areas of practice and subspecialties • Ethical issues • Roles and responsibilities of nurse • INC & SNC Acts	• Lecture cum discussion	• Short answer • Objective type
III	7 (T)	Identify members of forensic team and describe role of forensic nurse	Forensic Team • Members and their roles Comprehensive forensic nursing care of victim and family • Physical aspects • Psychosocial aspects • Cultural and spiritual aspects • Legal aspects • Assist forensic team in care beyond scope of her practice • Admission and discharge/referral/death of victim of violence • Responsibilities of nurse as a witness Evidence preservation – role of nurses • Observation • Recognition	• Lecture cum Discussion • Hypothetical/real case presentation • Observation of post-mortem • Visit to department of forensic medicine	• Objective type • Short answer • Write report

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Collection • Preservation • Documentation of Biological and other evidence related to criminal/traumatic event • Forwarding biological samples for forensic examination		
IV	3 (T)	Describe fundamental rights and human rights commission	Introduction of Indian Constitution Fundamental Rights • Rights of victim • Rights of accused Human Rights Commission	• Lecture cum discussion • Written Assignment • Visit to prison	• Short answer • Assessment of written assignment • Write visit report
V	5 (T)	Explain Indian judicial system and laws Discuss the importance of POSCO Act	Sources of laws and law-making powers Overview of Indian Judicial System • JMFC (Judicial Magistrate First Class) • District • State • Apex Civil and Criminal Case Procedures • IPC (Indian Penal Code) • ICPC • IE Act (Indian Evidence Act) Overview of POSCO Act	• Lecture cum discussion • Guided reading • Lecture cum discussion	• Quiz • Short answer

CHILD HEALTH NURSING - II

PLACEMENT: VI SEMESTER

THEORY: 2 Credits (40 hours)

PRACTICUM: Clinical: 1 Credit (80 hours)

DESCRIPTION: This course is designed for developing an understanding of the modern approach to child-care, identification, prevention and nursing management of common health problems of neonates and children.

COMPETENCIES: On completion of the course, the students will be able to

1. Apply the knowledge of pathophysiology and provide nursing care to children with Cardiovascular, GI, genitourinary, nervous system disorders, orthopedic disorders, eye, ear and skin disorders and communicable diseases
2. Provide care to children with common behavioural, social and psychiatric problems
3. Manage challenged children
4. Identify the social and welfare services for challenged children

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	20 (T)	Describe the etiology, pathophysiology, clinical manifestation and nursing management of children with disorders of cardiovascular, gastrointestinal, genitourinary, and nervous system	Cardiovascular system: • Identification and Nursing management of congenital malformations • Congenital heart diseases: Cyanotic and Acyanotic (ASD, VSD, PDA, TOF) • Others: Rheumatic fever and Rheumatic heart disease, Congestive cardiac failure • Hematological conditions: a) Congenital: Hemophilia, Thalassemia b) Others: Anemia, Leukemia, Idiopathic thrombocytopenic purpura, Hodgkins and non-hodgkins lymphoma Gastro-intestinal system: • Identification and Nursing management of congenital malformations. • Congenital: Cleft lip, Cleft palate, Congenital hypertrophic pyloric stenosis, Hirschsprungs disease (Megacolon), Anorectal malformation, Malabsorption syndrome, Abdominal wall defects, Hernia • Others: Gastroenteritis, Diarrhea, Vomiting, Protein energy malnutrition, Intestinal obstruction, Hepatic diseases, intestinal parasites Genitourinary urinary system: • Identification and Nursing management of congenital malformations. • Congenital: Wilms tumor, Extropy of bladder, Hypospadias, Epispadias, Obstructive uropathy • Others: Nephrotic syndrome, Acute glomerulonephritis, renal failure Nervous system: • Identification and Nursing management of congenital malformations a) Congenital: Spina bifida, Hydrocephalous. b) Others: Meningitis, Encephalitis, Convulsive disorders (convulsions and seizures), Cerebral palsy head injury	• Lecture cum discussion • Demonstration and practice session	• Short answer • Objective type • Assessment of skills with checklist
II	10 (T)	Describe the etiology, pathophysiology, clinical manifestation and nursing	Orthopedic disorders: • Club foot	• Lecture cum discussion • Demonstration	• Short answer • Objective type • Assessment of

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		management of children with Orthopedic disorders, eye, ear and skin disorders Explain the preventive measures and strategies for children with communicable diseases	• Hip dislocation and • Fracture Disorder of eye, ear and skin: • Refractory errors • Otitis media and • Atopic dermatitis Communicable diseases in children, their identification/ diagnosis, nursing management in hospital, in home, control & prevention: • Tuberculosis • Diphtheria • Tetanus • Pertussis • Poliomyelitis • Measles • Mumps, and • Chickenpox • HIV/AIDS • Dengue fever • COVID-19	• Practice session • Clinical practice	skills with checklist
III	10 (T)	Describe the management of children with behavioral & social problems Identify the social & welfare services for challenged children	Management of behavior and social problems in children • Child Guidance clinic • Common behavior disorders in children and management ◦ Enuresis and Encopresis ◦ Nervousness ◦ Nail biting ◦ Thumb sucking ◦ Temper tantrum ◦ Stealing ◦ Aggressiveness ◦ Juvenile delinquency ◦ School phobia ◦ Learning disability • Psychiatric disorders in children and management ◦ Childhood schizophrenia ◦ Childhood depression ◦ Conversion reaction ◦ Posttraumatic stress disorder ◦ Autistic spectrum disorders	• Lecture cum discussion • Field visits to child guidance clinics, school for mentally & physically, socially challenged	• Short answer • Objective type • Assessment of field reports

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Eating disorder in children and management - Obesity - Anorexia nervosa - Bulimia - Management of challenged children. - Mentally - Physically - Socially - Child abuse, - Substance abuse - Welfare services for challenged children in India		

CHILD HEALTH NURSING - II – CLINICAL PRACTICUM (1 Credit – 80 hours)

Given under Child Health Nursing - I as I & II

MENTAL HEALTH NURSING - II

PLACEMENT: VI SEMESTER

THEORY: 1 Credit (40 Hours)

PRACTICUM: Clinical: 2 Credits (160 Hours)

DESCRIPTION: This course is designed to provide the students with basic understanding and skills essential to meet psychiatric emergencies and perform the role of community mental health nurse.

COMPETENCIES: On completion of the course, the students will be able to

1. Apply nursing process in providing care to patients with substance use disorders, and personality and sexual disorders.
2. Apply nursing process in providing care to patients with behavioural and emotional disorders occurring during childhood and adolescence.
3. Apply nursing process in providing care to patients with organic brain disorders.
4. Identify and respond to psychiatric emergencies.
5. Carry out crisis interventions during emergencies under supervision.
6. Perform admission and discharge procedures as per MHCA 2017.
7. Explore the roles and responsibilities of community mental health nurse in delivering community mental health services.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
I	6 (T)	Describe the etiology, psychodynamics, clinical manifestations, diagnostic criteria and management of patients with substance use disorders	Nursing Management of Patients with Substance Use Disorders • Prevalence and incidence • Commonly used psychotropic substance: classifications, forms, routes, action, intoxication and withdrawal • Psychodynamics/etiology of substance use disorder (Terminologies: Substance Use, Abuse, Tolerance, Dependence, Withdrawal) • Diagnostic criteria/formulations • Nursing Assessment: History (substance history), Physical, mental assessment and drug and drug assay • Treatment (detoxification, antabuse and narcotic antagonist therapy and harm reduction, Brief interventions, MET, refusal skills, maintenance therapy) and nursing management of patients with substance use disorders • Special considerations for vulnerable population • Follow-up and home care and rehabilitation	• Lecture cum discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems
II	6 (T)	Describe the etiology, psychodynamics, clinical manifestations, diagnostic criteria and management of patients with personality, and sexual disorders	Nursing Management of Patient with Personality and Sexual Disorders • Prevalence and incidence • Classification of disorders • Etiology, psychopathology, characteristics, diagnosis • Nursing Assessment: History, Physical and mental health assessment • Treatment modalities and nursing management of patients with personality, and sexual disorders • Geriatric considerations • Follow-up and home care and rehabilitation	• Lecture cum discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems
III	8 (T)	Describe the etiology, psychopathology, clinical manifestations, diagnostic criteria and management of childhood and adolescent disorders including mental deficiency	Nursing Management of Behavioural & Emotional Disorders occurring during Childhood and Adolescence (Intellectual disability, autism, attention deficit, hyperactive disorder, eating disorders, learning disorder) • Prevalence and incidence • Classifications • Etiology, psychodynamics, Characteristics, diagnostic criteria/formulations	• Lecture cum discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			• Nursing Assessment: History, Physical, mental status examination and IQ assessment • Treatment modalities and nursing management of childhood disorders including intellectual disability • Follow-up and home care and rehabilitation		
IV	5 (T)	Describe the etiology, psychopathology, clinical manifestations, diagnostic criteria and management of organic brain disorders.	Nursing Management of Organic Brain Disorders (Delirium, Dementia, amnesic disorders) • Prevalence and incidence • Classification • Etiology, psychopathology, clinical features, diagnosis and Differential diagnosis • Nursing Assessment: History, Physical, mental and neurological assessment • Treatment modalities and nursing management of organic brain disorders • Follow-up and home care and rehabilitation	• Lecture cum discussion • Case discussion • Case presentation • Clinical practice	• Essay • Short answer • Assessment of patient management problems
V	6 (T)	Identify psychiatric emergencies and carry out crisis intervention	Psychiatric Emergencies and Crisis Intervention • Types of psychiatric emergencies (attempted suicide, violence/ aggression, stupor, delirium tremens and other psychiatric emergencies) and their managements • Maladaptive behaviour of individual and groups, stress, crisis and disaster(s) • Types of crisis • Crisis intervention: Principles, Techniques and Process - Stress reduction interventions as per stress adaptation model - Coping enhancement - Techniques of counseling	• Lecture cum discussion • Case discussion • Case presentation • Clinical practice	• Short answer • Objective type
VI	4 (T)	Explain legal aspects applied in mental health settings and role of the nurse	Legal Issues in Mental Health Nursing • Overview of Indian Lunacy Act and The Mental Health Act 1987 • (Protection of Children from Sexual Offence) POSCO Act • Mental Health Care Act (MHCA) 2017 • Rights of mentally ill clients • Forensic psychiatry and nursing • Acts related to narcotic and psychotropic substances and illegal drug trafficking	• Lecture cum discussion • Case discussion	• Short answer • Objective type

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			- Admission and discharge procedures as per MHCA 2017 - Role and responsibilities of nurses in implementing MHCA 2017		
VII	5 (T)	Describe the model of preventive psychiatry Describe Community Mental health services and role of the nurse	Community Mental Health Nursing - Development of Community Mental Health Services: - National mental health policy viz. National Health Policy - National Mental Health Program - Institutionalization versus Deinstitutionalization - Model of Preventive psychiatry - Mental Health Services available at the primary, secondary, tertiary levels including rehabilitation and nurses' responsibilities - Mental Health Agencies: Government and voluntary, National and International - Mental health nursing issues for special populations: Children, Adolescence, Women Elderly, Victims of violence and abuse, Handicapped, HIV/AIDS etc.	- Lecture cum discussion - Clinical/ field practice - Field visits to mental health service agencies	- Short answer - Objective type - Assessment of the field visit reports

CLINICAL PRACTICUM – 2 Credits (80 hours)

Clinical Practicum for Mental Health Nursing - I & II are given under Mental Health Nursing - I Clinical Practicum
NURSING MANAGEMENT AND LEADERSHIP

PLACEMENT: VI Semester

THEORY: 3 Credits (60 hours) includes Lab/Skill Lab hours also

PRACTICUM: Clinical: 1 Credits (80 hours)

DESCRIPTION: This course is designed to enable students to acquire knowledge and competencies in areas of administration, and management of nursing services and education. Further prepares the students to develop leadership competencies and perform their role as effective leaders in an organization.

COMPETENCIES: On completion of the course, the students will be able to

- Analyze the health care trends influencing development of nursing services and education in India.
- Describe the principles, functions and process of management applied to nursing.
- Develop basic understanding and beginning competencies in planning and organizing nursing services in a hospital.
- Apply the concept of human resource management and identify the job description for all categories of nursing personnel including in service education.
- Discuss the principles and methods of staffing and scheduling in an individual hospital/nursing unit.
- Develop skill in management of materials and supplies including inventory control.
- Develop team working and inter professional collaboration competencies.
- Identify effective leadership styles and develop leadership competencies.
- Utilize the knowledge of principles and line of control and participate in quality management and evaluation activities.
- Utilize the knowledge related to financial planning in nursing services and education during budgetary process.

11. Apply the knowledge of nursing informatics in maintenance of records and reports relevant to patient information, nursing care and progress.
12. Demonstrate understanding of the INC guidelines for establishment and accreditation of educational institutions in terms of faculty norms, physical infrastructure and clinical facilities.
13. Demonstrate beginning competencies in planning, organizing and staffing at college including implementation and evaluation of curriculum.
14. Identify the legal issues and laws relevant to nursing practice and education.
15. Apply the knowledge and utilize the various opportunities for professional advancement.

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	1 (T)	Explore the health care, development of nursing services and education in India and trends	Health Care and Development of Nursing Services in India • Current health care delivery system of India – review • Planning and development of nursing services and education at global and national scenario • Recent trends and issues of nursing service and management	• Lecture cum discussion • Directed reading and written assignment	• Short answer • Assessment of assignment
II	2 (T)	Explain the principles and functions of management applied to nursing Describe the introductory concepts of management as a process	Management Basics Applied to Nursing • Definitions, concepts and theories of management • Importance, features and levels of management • Management and administration • Functions of management • Principles of management • Role of a nurse as a manager Introduction to Management Process • Planning • Organizing • Staffing • Directing/Leading • Controlling	• Lecture and discussion	• MCQ • Short answer
			MANAGEMENT OF NURSING SERVICES		
III	4 (T)	Describe the essential elements of planning	Planning Nursing Services • Vision, Mission, philosophy, objectives • Nursing service policies, procedures and manuals • Functional and operational planning	• Lecture and Discussion • Visit to specific hospital/ patient care units • Demonstration of disaster drill in the respective setting	• Formulate Mission & Vision Statement for the nursing department/ unit • Assessment

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Strategic planning • Program planning – Gantt chart & milestone chart • Budgeting – concepts, principles, types, • Budget proposal, cost benefit analysis • Planning hospital and patient care unit (Ward) • Planning for emergency and disaster		• of problem-solving exercises • Visit Report
IV	4 (T)	Discuss the concepts of organizing including hospital organization	Organizing • Organizing as a process – assignment, delegation and coordination • Hospital – types, functions & organization • Organizational development • Organizational structure • Organizational charts • Organizational effectiveness • Hospital administration, Control & line of authority • Hospital statistics including hospital utilization indices • Nursing care delivery systems and trends • Role of nurse in maintenance of effective organizational climate	• Lecture cum discussion • Comparison of organizational structure of various organizations • Nursing care delivery systems – assignment • Preparation of Organizational chart of hospital/ Nursing services	• Short answer • Assessment of assignment
V	6 (T)	Identify the significance of human resource management (HRM) and material management and discuss its elements	Staffing (Human resource management) • Definition, objectives, components and functions Staffing & Scheduling • Staffing – Philosophy, staffing activities • Recruiting, selecting, deployment • Training, development, credentialing, retaining, promoting, transfer, terminating, superannuation • Staffing units – Projecting staffing requirements/calculation of requirements of staff resources Nurse patient ratio, Nurse Population ratio as per SIU norms/IPH Norms, and Patient classification system • Categories of nursing personnel including job description of all levels • Assignment and nursing care responsibilities	• Lecture and discussion • Role play • Games self-assessment, case discussion and practice session • Calculation of staffing requirements for a specified ward	• Formulate Job description at different levels of care & compare with existing system • Preparation of duty roster

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
		Explain the procedural steps of material management Develop managerial skill in inventory control and actively participate in procurement process	• Turnover and absenteeism • Staff welfare • Discipline and grievances In-Service Education • Nature and scope of in-service education program • Principles of adult learning – review • Planning and organizing in-service educational program • Methods, techniques and evaluation • Preparation of report Material Resource Management • Procurement, purchasing process, inventory control & role of nurse • Auditing and maintenance in hospital and patient care unit	• Visit to inventory store of the institution	• Preparation of MMF/records • Preparation of log book & condemnation documents • Visit Report
VI	5 (T)	Describe the important methods of supervision and guidance	Directing and Leading • Definition, principles, elements of directing • Supervision and guidance • Participatory management • Inter-professional collaboration • Management by objectives • Team management • Assignments, rotations • Maintenance of discipline • Leadership in management	• Lecture and discussion • Demonstration of record & report maintenance in specific wards/ departments	• Assignment on Reports & Records maintained in nursing department/ • Preparation of protocols and manuals
VII	4 (T)	Discuss the significance and changing trends of nursing leadership Analyze the different leadership styles and develop leadership competencies	Leadership • Definition, concepts, and theories • Leadership principles and competencies • Leadership styles: Situational leadership, Transformational leadership • Methods of leadership development • Mentorship/preceptorship in nursing • Delegation, power & politics, empowerment, mentoring and coaching • Decision making and problem solving	• Lecture cum discussion • Self-assessment • Report on types of leadership adopted at different levels of health care in the given setting • Problem solving/ Conflict management exercise • Observation of managerial roles at different levels (middle level managers-ward incharge, ANS)	• Short answer • Essay • Assessment of exercise/report

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Conflict management and negotiation • Implementing planned change		
VIII	4 (T)	Explain the process of controlling and its activities	Controlling • Implementing standards, policies, procedures, protocols and practices • Nursing performance audit, patient satisfaction • Nursing rounds, Documentation – records and reports • Total quality management – Quality assurance, Quality and safety • Performance appraisal • Program evaluation review technique (PERT) • Bench marking, Activity plan (Gantt chart) • Critical path analysis	• Lecture cum discussion • Preparation of policies/ protocols for nursing units/ department	• Assessment of prepared protocols
IX	4 (T)	Explain the concepts of organizational behavior and group dynamics	Organizational Behavior and Human Relations • Concepts and theories of organizational behavior • Group dynamics • Review – Interpersonal relationship • Human relations • Public relations in the context of nursing • Relations with professional associations and employee unions • Collective bargaining • Review – Motivation and morale building • Communication in the workplace – assertive communication • Committees – importance in the organization, functioning	• Lecture and discussion • Role play/ exercise – Group dynamics & human relations	• Short answer • OSCE
X	2 (T)	Describe the financial management related to nursing services	Financial Management • Definition, objectives, elements, functions, principles & scope of financial management • Financial planning (budgeting for nursing department) • Proposal, projecting requirement for staff, equipment and supplies for – Hospital & patient care units & emergency and disaster units	• Lecture cum discussion • Budget proposal review • Preparation of budget proposal for a specific department	• Short answer • Essay • Assessment of assignment

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			- Budget and Budgetary process - Financial audit		
XI	1 (T)	Review the concepts, principles and methods and use of nursing informatics	Nursing Informatics/ Information Management – Review - Patient records - Nursing records - Use of computers in hospital, college and community - Telemedicine & Tele nursing - Electronic Medical Records (EMR), EHR	- Review - Practice session - Visit to departments	Short answer
XII	1 (T)	Review personal management in terms of management of emotions, stress and resilience	Personal Management – Review - Emotional intelligence - Resilience building - Stress and time management – de-stressing - Career planning	- Review - Discussion	
			MANAGEMENT OF NURSING EDUCATIONAL INSTITUTIONS		
XIII	4 (T)	Describe the process of establishing educational institutions and its accreditation guidelines	Establishment of Nursing Educational Institutions - Indian Nursing Council norms and guidelines – Faculty norms, physical facilities, clinical facilities, curriculum implementation, and evaluation/examination guidelines - Coordination with regulatory bodies – INC and State Nursing Council - Accreditation – Inspections - Affiliation with university/State council/board of examinations	- Lecture and discussion - Visit to one of the regulatory bodies	Visit report
XIV	4 (T)	Explain the planning and organizing functions of a nursing college	Planning and Organizing - Philosophy, objectives and mission of the college - Organization structure of school/college - Review – Curriculum planning - Planning teaching and learning experiences, clinical facilities – master plan, time table and clinical rotation - Budget planning – faculty, staff, equipment & supplies, AV aids, Lab equipment, library books, journals, computers and maintenance - Infrastructure facilities – college, classrooms, hostel, library, labs,	- Directed reading – INC Curriculum - Preparation of organizational structure of the college - Written assignment – writing philosophy of a teaching department - Preparation of master plan, time table and clinical rotation	- Short answer - Essay - Assessment of assignment

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			computer lab, transport facilities • Records & reports for students, staff, faculty and administrative • Committees and functioning • Clinical experiences		
XV	4 (T)	Develop understanding of staffing the college and selecting the students	Staffing and Student Selection • Faculty/staff selection, recruitment and placement, job description • Performance appraisal • Faculty development • Faculty/staff welfare • Student recruitment, admission, clinical placement	• Guided reading on faculty norms • Faculty welfare activities report • Writing job description of tutors	• Short answer • Activity report • Assessment of job description
XVI	4 (T)	Analyze the leadership and management activities in an educational organization	Directing and Controlling • Review – Curriculum implementation and evaluation • Leadership and motivation, supervision – review • Guidance and counseling • Quality management – educational audit • Program evaluation, evaluation of performance • Maintaining discipline • Institutional records and reports – administrative, faculty, staff and students	• Review principles of evaluation • Assignment – Identify disciplinary problems among students • Writing student record	• Short answer • Assessment of assignment and record
XVII	4 (T)	Identify various legal issues and laws relevant to nursing practice	PROFESSIONAL CONSIDERATIONS Review – Legal and Ethical Issues • Nursing as a profession – Characteristics of a professional nurse • Nursing practice – philosophy, aim and objectives • Regulatory bodies – INC and SNC constitution and functions Review – Professional ethics • Code of ethics and professional conduct – INC & ICN • Practice standards for nursing – INC • International Council for Nurses (ICN) Legal aspects in nursing: • Consumer protection act, patient rights • Legal terms related to practice, legal		

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			system – types of law, tort law & liabilities • Laws related to nursing practice – negligence, malpractice, breach, penalties • Invasion of privacy, defamation of character • Nursing regulatory mechanisms – registration, licensure, renewal, accreditation, nurse practice act, regulation for nurse practitioner/specialist nursing practice		
XVIII	2 (T)	Explain various opportunities for professional advancement	Professional Advancement • Continuing Nursing Education • Career opportunities • Membership with professional organizations – national and international • Participation in research activities • Publications – journals, newspaper	• Prepare journal list available in India • Write an article – research/ clinical	• Assessment of assignments

Note: Less than 1 credit lab hours are not specified

CLINICAL PRACTICUM

Clinical: 2 Credits (80 hours) 2 weeks × 40 hours per week = 80 hours

Practice Competencies:

Hospital

1. Prepare organizational chart of hospital/Nursing services/nursing department
2. Calculate staffing requirements for a particular nursing unit/ward
3. Formulate Job description at different levels of care
4. Prepare duty roster for staff/students at different levels
5. Participate in procuring/purchase of equipment & supplies
6. Prepare log book/MMF for specific equipment/materials
7. Maintain and store inventory and keep daily records
8. Prepare and maintain various records & reports of the settings – incident reports/adverse reports/audit reports
9. Prepare and implement protocols & manuals
10. Participate in supervision, evaluation and conducting in service education for the staff

College & Hostel

1. Prepare organizational chart of college
2. Formulate job description for tutors
3. Prepare Master plan, time table and clinical rotation
4. Prepare student anecdotes
5. Participate in planning, conducting and evaluation of clinical teaching

6. Participate in evaluation of students' clinical experience
7. Participate in planning and conducting practical examination OSCE – end of posting

CLINICAL POSTING: Management experience in hospital & college.

MIDWIFERY/OBSTETRICS AND GYNECOLOGY (OBG) NURSING - I
including SBA module

PLACEMENT: VI SEMESTER

THEORY: 3 Credits (60 hours)

PRACTICUM: Skill Lab: 1 Credit (40 hours); Clinical: 3 Credits (240 hours)

DESCRIPTION: This course is designed for students to develop knowledge and competencies on the concepts and principles of midwifery. It helps them to acquire knowledge and skills in rendering respectful maternity care to woman during antenatal, intranatal and postnatal periods in hospitals and community settings. It further helps to develop skills in managing normal neonates and participate in family welfare programs.

COMPETENCIES: On completion of the program, the students will be able to

1. Demonstrate professional accountability for the delivery of nursing care as per INC standards/ICM competencies that are consistent with moral, altruistic, legal, ethical, regulatory and humanistic principles in midwifery practice.
2. Communicate effectively with individuals, families and professional colleagues fostering mutual respect and shared decision making to enhance health outcomes.
3. Recognize the trends and issues in midwifery and obstetrical nursing.
4. Review and describe the anatomy and physiology of human reproductive system and conception.
5. Describe and apply physiology in the management of normal pregnancy, birth and puerperium.
6. Demonstrate competency in providing respectful and evidence based maternity care for women during the antenatal, intranatal and postnatal period.
7. Uphold the fundamental human rights of individuals when providing midwifery care.
8. Promote physiologic labour and birth, and conduct normal childbirth.
9. Provide evidence based essential newborn care.
10. Apply nursing process approach in caring for women and their families.
11. Describe the methods of contraception and role of nurse/midwife in family welfare services.
12. Recognize the importance of and actively participate in family welfare programs.
13. Provide youth friendly health services and care for women affected by gender based violence.

COURSE OUTLINE

T – Theory, SL/L – Skill Lab/Lab, C – Clinical

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
1	8 (T)	Explain the history and current scenario of midwifery in India Review vital health	Introduction to midwifery • History of midwifery in India • <i>Current scenario:</i> ◦ Trends of maternity care in India ◦ Midwifery in India – Transformative education for relationship based and transformative midwifery practice in India • Vital health indicators – Maternal mortality ratio, Infant Mortality Rate,	• Discussion • Demonstration • Role play • Directed reading and assignment: ICM competencies • Scenario based learning	• Short answer • Objective type • Essay • Quiz

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		indicators Describe the various national health programs related to RMNCH+A Identify the trends and issues in midwifery Discuss the legal and ethical issues relevant to midwifery practice	Neonatal Mortality Rate, perinatal mortality rate, fertility rates - Maternal death audit - National health programs related to RMNCH+A (Reproductive Maternal Newborn and Child Health + Adolescent Health) <i>Current trends in midwifery and OBG nursing:</i> - Respectful maternity and newborn care (RMNC) - Midwifery-led care units (MLCU) - Women centered care, physiologic birthing and demedicalization of birth - Birthing centers, water birth, lotus birth - Essential competencies for midwifery practice (ICM) - Universal rights of child-bearing women - Sexual and reproductive health and rights - Women's expectations & choices about care <i>Legal provisions in midwifery practice in India:</i> - INC/MOH&FW regulations - ICM code of ethics - Ethical issues in maternal and neonatal care - Adoption laws, MTP act, Pre-Natal Diagnostic Test (PNDT) Act, Surrogate mothers - Roles and responsibilities of a midwife/Nurse practitioner midwife in different settings (hospital/ community) - Scope of practice for midwives		
II	6 (T) 3 (L)	Review the anatomy and physiology of human reproductive system	Anatomy and physiology of human reproductive system and conception (Maternal, Fetal & Newborn physiology) <i>Review:</i> - Female organs of reproduction - Female pelvis – bones, joints, ligaments, planes, diameters, landmarks, inclination, pelvic variations - Foetal skull – bones, sutures,	- Lecture - Discussion - Self-directed learning - Models - Videos & films	- Quiz - Short answer - Essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			fontanelles, diameters, moulding - Fetopelvic relationship - Physiology of menstrual cycle, menstrual hygiene - Fertilization, conception and implantation - Embryological development - Placental development and function, placental barrier - Fetal growth and development - Fetal circulation & nutrition		
III	12 (T) 10 (L) 40 (C)	Provide preconception care to eligible couples Describe the physiology, assessment and management of normal pregnancy Demonstrate knowledge, attitude and skills of midwifery practice throughout 1 st , 2 nd and 3 rd	Assessment and management of normal pregnancy (ante-natal): Pre-pregnancy Care - Review of sexual development (<i>Self Learning</i>) - Socio-cultural aspects of human sexuality (<i>Self Learning</i>) - Preconception care - Pre-conception counseling (including awareness regarding normal birth) Genetic counseling (<i>Self Learning</i>) - Planned parenthood Pregnancy assessment and antenatal care (I, II & III Trimesters) Normal pregnancy - Physiological changes during pregnancy - Assess and confirm pregnancy: Diagnosis of pregnancy – Signs, differential diagnosis and confirmatory tests - Review of maternal nutrition & malnutrition - Building partnership with women following RMC protocol - Fathers' engagement in maternity care Ante-natal care: 1st Trimesters - Antenatal assessment: History taking, physical examination, breast examination, laboratory investigation - Identification and management of minor discomforts of pregnancy	- Lecture - Discussion - Demonstration - Self-Learning - Health talk - Role play - Counseling session - Case discussion/presentation - Simulation - Supervised clinical practice - Refer SBA module & Safe motherhood	- Short answer - Objective type - Assessment of skills with check list - Case study evaluation - OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		trimesters	• Antenatal care : as per GoI guidelines • Antenatal counseling (lifestyle changes, nutrition, shared decision making, risky behavior, sexual life during pregnancy, immunization etc.) • Danger signs during pregnancy • Respectful care and compassionate communication • Recording and reporting: as per the GoI guidelines • Role of Doula/ASHAs II Trimester • Antenatal assessment: abdominal palpation, fetal assessment, auscultate fetal heart rate – Doppler and pinnard's stethoscope • Assessment of fetal well-being: DFMC, biophysical profile, Non stress test, cardio-tocography, USG, Vibro acoustic stimulation, biochemical tests. • Antenatal care • Women centered care • Respectful care and compassionate communication • Health education on IFA, calcium and vitamin D supplementation, glucose tolerance test, etc. • Education and management of physiological changes and discomforts of 2nd trimester • Rh negative and prophylactic anti D • Referral and collaboration, empowerment • Ongoing risk assessment • Maternal Mental Health III Trimester • Antenatal assessment: abdominal palpation, fetal assessment, auscultate fetal heart rate – Doppler and pinnard's stethoscope • Education and management of physiological changes and discomforts of 3rd trimester • Third trimester tests and screening • Fetal engagement in late pregnancy • Childbirth preparation classes	• booklet • Lab tests – performance and interpretation • Demonstration • Roleplay • Demonstration of antenatal assessment	

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			• Birth preparedness and complication readiness including micro birth planning • Danger signs of pregnancy – recognition of ruptured membranes • Education on alternative birthing positions – women's preferred choices, birth companion • Ongoing risk assessment • Cultural needs • Women centered care • Respectful and compassionate communication • Health education on exclusive breastfeeding • Role of Doula/ASHA's	• Scenario based learning • Lecture • Simulation • Role play • Refer GoI Guidelines • Health talk • Counseling session • Demonstration of birthing positions • Workshop on alternative birthing positions	
IV	12 (T) 12 (L) 80 (C)	Apply the physiology of labour in promoting normal childbirth Describe the management and care during labour Discuss how to maintain a safe environment for labour Work effectively for pain management during labour	Physiology, management and care during labour • Normal labour and birth • Onset of birth/labour • Per vaginal examination (if necessary) • Stages of labour • Organization of labour room – Triage, preparation for birth • Positive birth environment • Respectful care and communication • Drugs used in labour as per GoI guidelines First Stage • Physiology of normal labour • Monitoring progress of labour using Partograph/labour care guide • Assessing and monitoring fetal well being • Evidence based care during 1st stage of labour • Pain management in labour (non-pharmacological) • Psychological support – Managing fear • Activity and ambulation during first stage of labour	• Lecture • Discussion • Demonstration • Bedside clinics • Case discussion/ presentation • Simulated practice • Supervised Clinical practice – Per vaginal examination, Conduction of normal childbirth • Refer SBA module • LaQshya guidelines • Dakshata guidelines	• Essay type • Short answer • Objective type • Case study evaluation • Assessment of skills with check list • OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		Discuss how the midwife provides care and support for the women during birth to enhance physiological birthing and promote normal birth Assess and provide care of the newborn immediately following birth Discuss the impact of labour and birth as a transitional event in the woman's life	• Nutrition during labour • Promote positive childbirth experience for women • Birth companion • Role of Doula/ASHA's Second stage • Physiology (Mechanism of labour) • Signs of imminent labour • Intrapartum monitoring • Birth position of choice • Vaginal examination • Psychological support • Non-directive coaching • Evidence based management of physiological birth/Conduction of normal childbirth • Essential newborn care (ENBC) • Immediate assessment and care of the newborn • Role of Doula/ASHA's Third Stage • Physiology – placental separation and expulsion, hemostasis • Physiological management of third stage of labour • Active management of third stage of labour (recommended) • Examination of placenta, membranes and vessels • Assess perineal, vaginal tear/ injuries and suture if required • Insertion of postpartum IUCD • Immediate perineal care • Initiation of breast feeding • Skin to skin contact • Newborn resuscitation Fourth Stage <i>Observation, Critical Analysis and Management of mother and newborn</i> • Maternal assessment, observation fundal height, uterine consistency, urine output, blood loss • Documentation and Record of birth	• Refer ENBC, NSSK module • Demonstration • Group work • Scenario based learning • Simulation • Role play • Demonstration • Videos	

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
		Ensure initiation of breast feeding and adequate latching	- Breastfeeding and latching - Managing uterine cramp - Alternative/complementary therapies - Role of Doula/ASHA's - Various childbirth practices - Safe environment for mother and newborn to promote bonding - Maintaining records and reports		
V	7 (T) 6 (L) 40 (C)	Describe the physiology, management and care of normal puerperium	Postpartum care/Ongoing care of women - Normal puerperium – Physiology, duration - Post-natal assessment and care – facility and home-based care - Perineal hygiene and care - Bladder and bowel function - Minor disorders of puerperium and its management - Physiology of lactation and lactation management - Postnatal counseling and psychological support - Normal postnatal baby blues and recognition of post-natal depression - Transition to parenthood - Care for the woman up to 6 weeks after childbirth - Cultural competence (Taboos related to postnatal diet and practices) - Diet during lactation-review - Post-partum family planning - Follow-up of postnatal mothers - Drugs used in the postnatal period - Records and reports	- Lecture - Discussion - Demonstration - Health talk - Simulated practice - Supervised clinical practice - Refer SBA module	- Essay type - Short answer - Objective type - Assessment of skills with checklist - OSCE
VI	7 (T) 7 (L) 40 (C)	Discuss the need for and provision of compassionate, family centered midwifery care of the newborn Describe the assessment and care of normal neonate	Assessment and ongoing care of normal neonates - Family centered care - Respectful newborn care and communication - Normal Neonate – Physiological adaptation - Newborn assessment – Screening for congenital anomalies - Care of newborn up to 6 weeks after	- Lecture - Discussion - Demonstration - Simulated practice session - Supervised clinical practice - Refer safe deliver app module – newborn	- Essay type - Short answer - Objective type - Assessment of skills with checklist - OSCE

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
			the childbirth (Routine care of newborn) • Skin to skin contact and thermoregulation • Infection prevention • Immunization • Minor disorders of newborn and its management	management • Partial completion of SBA module	
VII	8 (T) 2 (L) 40 (C)	Explain various methods of family planning and role of nurse/midwife in providing family planning services Describe youth friendly services and role of nurses/ midwives Recognize the role of nurses/midwives in gender based violence	Family welfare services • Impact of early/frequent childbearing • Comprehensive range of family planning methods ◦ Temporary methods – Hormonal, non-hormonal and barrier methods ◦ Permanent methods – Male sterilization and female sterilization • Action, effectiveness, advantages, disadvantages, myths, misconception and medical eligibility criteria (MEC) for use of various family planning methods • Emergency contraceptives • Recent trends and research in contraception • Family planning counseling using Balanced Counseling Strategy (BCS) • Legal and rights aspects of FP • Human rights aspects of FP adolescents • Youth friendly services – SRHR services, policies affecting SRHR and attitude of nurses and midwives in provision of services (Review) • Importance of follow up and recommended timing Gender related issues in SRH • Gender based violence – Physical, sexual and abuse, Laws affecting GBV and role of nurse/midwife • Special courts for abused people • Gender sensitive health services including family planning	• Lecture • Supervised practice • Field visits • Scenario based learning • Discussion • GoI guidelines – injectable contraceptives, oral contraceptives, IUCD, male and female sterilization	• Essay type • Short answers • Objective type • Field visit reports • Vignettes

PRACTICUM**PLACEMENT: VI & VII SEMESTER****VI SEMESTER: MIDWIFERY/OBSTETRICS AND GYNECOLOGY (OBG) NURSING - I****SKILL LAB & CLINICAL:** Skill Lab – 1 Credit (40 hours); Clinical – 3 Credits (240 hours)**PRACTICE COMPETENCIES:** On completion of the course, the students will be able to:

1. Counsel women and their families on pre-conception care
2. Demonstrate lab tests ex. urine pregnancy test
3. Perform antenatal assessment of pregnant women
4. Assess and care for normal antenatal mothers
5. Assist and perform specific investigations for antenatal mothers
6. Counsel mothers and their families on antenatal care and preparation for parenthood
7. Conduct childbirth education classes
8. Organize labour room
9. Prepare and provide respectful maternity care for mothers in labour
10. Perform per-vaginal examination for a woman in labour if indicated
11. Conduct normal childbirth with essential newborn care
12. Demonstrate skills in resuscitating the newborn
13. Assist women in the transition to motherhood
14. Perform postnatal and newborn assessment
15. Provide care for postnatal mothers and their newborn
16. Counsel mothers on postnatal and newborn care
17. Perform PPIUCD insertion and removal
18. Counsel women on family planning and participate in family welfare services
19. Provide youth friendly health services
20. Identify, assess, care and refer women affected with gender based violence

SKILL LAB: Procedures/Skills for demonstration and return demonstration:

1. Urine pregnancy test
2. Calculation of EDD, Obstetrical score, gestational weeks
3. Antenatal assessment
4. Counseling antenatal mothers
5. Micro birth planning
6. PV examination
7. Monitoring during first stage of labour – Plotting and interpretation of partograph
8. Preparation for delivery – setting up labour room, articles, equipment
9. Mechanism of labour – normal
10. Conduction of normal childbirth with essential newborn care
11. Active management of third stage of labour
12. Placental examination
13. Newborn resuscitation
14. Monitoring during fourth stage of labour
15. Postnatal assessment

16. Newborn assessment
17. Kangaroo mother care
18. Family planning counseling
19. PPIUCD insertion and removal

CLINICAL POSTINGS (6 weeks × 40 hours per week = 240 hours)

Clinical Area	Duration (weeks)	Clinical Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Antenatal OPD and Antenatal ward	1 week	Perform antenatal assessment Perform laboratory tests for antenatal women and assist in selected antenatal diagnostic procedures Counsel antenatal women	- History collection - Physical examination - Obstetric examination - Pregnancy confirmation test - Urine testing - Blood testing for Hemoglobin, grouping & typing - Blood test for malaria - KICK chart - USG/NST - Antenatal counseling - Preparation for childbirth - Birth preparedness and complication readiness	- Antenatal palpation - Health talk - Case study	- OSCE - Case presentation
Labour room	3 weeks	Monitor labour using partograph Provide care to women during labour Conduct normal childbirth, provide care to mother and immediate care of newborn	- Assessment of woman in labour - Partograph - Per vaginal examination when indicated - Care during first stage of labour - Pain management techniques - Upright and alternative positions in labour - Preparation for labour – articles, physical, psychological - Conduction of normal childbirth - Essential newborn care - Newborn resuscitation - Active management of third stage of labour - Monitoring and care during fourth stage of labour	- Partograph recording - PV examination - Assisting/Conduction of normal childbirth - Case study - Case presentation - Episiotomy and suturing if indicated - Newborn resuscitation	- Assignment - case study - Case presentation - OSCE
Post-partum clinic and Postnatal Ward including FP unit	2 weeks	Perform postnatal assessment Provide care to normal postnatal mothers and newborn	- Postnatal assessment - Care of postnatal mothers – normal - Care of normal newborn - Lactation management	- Postnatal assessment - Newborn assessment - Case study	- Assignment - Case study - Case presentation

Clinical Area	Duration (weeks)	Clinical Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
		Provide postnatal counseling Provide family welfare services	• Postnatal counseling • Health teaching on postnatal and newborn care • Family welfare counseling	• Case presentation • PPIUCD insertion & removal	

Note: Partial Completion of SBA module during VI semester

VII SEMESTER

MIDWIFERY/OBSTETRICS AND GYNECOLOGY (OBG) NURSING - II

PRACTICUM

SKILL LAB & CLINICAL: Skill Lab – 1 Credit (40 hours), Clinical – 4 Credits (320 hours)

PRACTICE COMPETENCIES: On completion of the course, the students will be able to:

1. Identify, stabilize and refer antenatal women with complications
2. Provide care to antenatal women with complications
3. Provide post abortion care & counselling
4. Assist in the conduction of abnormal vaginal deliveries and caesarean section.
5. Demonstrate skills in resuscitating the newborn
6. Assist and manage complications during labour
7. Identify postnatal and neonatal complications, stabilize and refer them
8. Provide care for high risk antenatal, intranatal and postnatal women and their families using nursing process approach
9. Provide care for high risk newborn
10. Assist in advanced clinical procedures in midwifery and obstetric nursing
11. Provide care for women during their non childbearing period.
12. Assess and care for women with gynecological disorders
13. Demonstrate skills in performing and assisting in specific gynecological procedures
14. Counsel and care for couples with infertility

SKILL LAB: Procedures/Skills for demonstration and return demonstration:

1. Antenatal assessment and identification of complications
2. Post abortion care & counseling
3. Counseling antenatal women for complication readiness
4. Mechanism of labour – abnormal
5. Assisting in the conduction of abnormal vaginal deliveries and caesarean section.
6. Management of complications during pregnancy/labour/post partum (case studies/simulated scenarios)
7. Administration of Inj. Magnesium sulphate
8. Starting and maintaining an oxytocin drip for PPH
9. Management of PPH – Bimanual compression of uterus
10. Management of PPH – Balloon tamponade
11. Instruments used in obstetrics and gynecology
12. Visual inspection of cervix with acetic acid
13. Cervical biopsy
14. Breast examination
15. Counseling of infertile couples

CLINICAL POSTINGS (8 weeks × 40 hours per week = 320 hours)

Clinical Areas	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Antenatal OPD/ infertility clinics/ Reproductive medicine and antenatal ward	2 weeks	Perform/assist in selected advanced antenatal diagnostic procedures Provide antenatal care for women with complications of pregnancy Counsel antenatal mothers Provide post abortion care and postnatal counselling Provide counselling and support to infertile couples	- Kick chart, DFMC - Assist in NST/CTG/USG - Assisting in advanced diagnostic procedures - Care of antenatal women with complications in pregnancy - Antenatal counselling - Preparation for childbirth, Birth preparedness and complication readiness - Post abortion care - Post abortion counselling - Counselling infertile couples	- Antenatal palpation - Health talk - Case study	- Simulation - Case presentation - OSCE
Labour room	2 weeks	Conduction of normal childbirth Conduct/assist in abnormal deliveries Monitor labour using partograph Identify and manage complications during labour	- Assessment of woman in labour - Partograph - Pervaginal examination if indicated - Obstetric examination - Care during first stage of labour - Pain management techniques - Upright and alternative positions in labour - Preparation for labour – articles, physical, psychological - Conduction of normal childbirth - Essential newborn care - Newborn resuscitation - Active management of third stage of labour - Monitoring and care during fourth stage of labour - Identification, stabilization, referral and assisting in management of prolonged labour, cervical dystocia, CPD, contracted pelvis - Assist in the management of	- Partograph recording - Pain management during labour - Conduction of normal childbirth - Assisting in abnormal deliveries - Managing complication during labour - Case study - Case presentation	- Assignment - Case study - Case presentation - Simulation - OSCE

Clinical Areas	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
			abnormal deliveries – posterior position, breech deliveries, twin deliveries, vacuum extraction, forceps delivery, shoulder dystocia - Assist in cervical encircage procedures, D&C, D&E - Identify, assist and manage trauma to the birth canal, retained placenta, post partum hemorrhage, uterine atony - Management of obstetric shock		
Postnatal Ward	1 week	Perform postnatal assessment and identify postnatal complications Provide postnatal care Provide family welfare services	- Postnatal history collection and physical examination - Identify postnatal complications - Care of postnatal mothers – abnormal deliveries, caesarean section - Care of normal newborn - Lactation management - Postnatal counselling - Health teaching on postnatal and newborn care - Family welfare counselling	- Health talk - Postnatal assessment - Newborn assessment - Case studies - Case presentation - PPIUCD insertion and removal	- Role play - Assignment - Case study - Case presentation - Simulation - Vignettes - OSCE
Neonatal Intensive Care Unit	1 week	Perform assessment of newborn and identify complications/congenital anomalies Perform neonatal resuscitation Care of high risk newborn Provide care for newborns in ventilator, incubator etc Assist/perform special neonatal procedures	- Neonatal assessment – identification of complication, congenital anomalies. - Observation of newborn - Neonatal resuscitation - Phototherapy and management of jaundice in newborn - Assist in Exchange transfusion - Neonatal feeding – spoon and katori, paladai, NG tube - Care of baby in incubator, ventilator, warmer - Infection control in the nursery - Neonatal medications - Starting IV line for newborn, drug calculation	- Case study - Case presentation - Assignments - Simulated practice	- Case presentation - Care study - Care plan - Simulation, Vignettes - OSCE
Obstetric/ Gynae operation theatre & Gynecology	2 weeks	Assist in gynecological and obstetric surgeries	- Observe/Assist in caesarean section - Management of retained placenta	- Assisting in obstetric and gynecological surgery - Tray set-up for	- Assignment - Tray set-up for obstetric and gynecological surgeries

Clinical Areas	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
ward		Care for women with gynecological disorders	- Gynecological surgeries - Hysterectomy - Uterine rupture - Care of women with gynecological conditions - Health education	- caesarean section - Care plan	- Case presentation - Simulation - Vignettes

Note: Completion of safe delivery App module during VII Semester

COMMUNITY HEALTH NURSING – II

PLACEMENT: VII SEMESTER

THEORY: 5 Credits (100 hours) – includes lab hours also

PRACTICUM: Clinical: 2 Credit (160 hours)

DESCRIPTION: This course is designed to help students gain broad perspective of specialized roles and responsibilities of community health nurses and to practice in various specialized health care settings. It helps students to develop knowledge and competencies required for assessment, diagnosis, treatment, and nursing management of individuals and families within the community in wellness and illness continuum.

COMPETENCIES: On completion of the course, the students will be able to

1. Demonstrate beginning practice competencies/skills relevant to provide comprehensive primary health care/community-based care to clients with common diseases and disorders including emergency and first aid care at home/clinics/centres as per predetermined protocols/drug standing orders approved by MOH&FW
2. Provide maternal, newborn and child care, and reproductive health including adolescent care in the urban and rural health care settings
3. Describe the methods of collection and interpretation of demographic data
4. Explain population control and its impact on the society and describe the approaches towards limiting family size
5. Describe occupational health hazards, occupational diseases and the role of nurses in occupational health programs
6. Identify health problems of older adults and provide primary care, counseling and supportive health services
7. Participate in screening for mental health problems in the community and providing appropriate referral services
8. Discuss the methods of data collection for HMIS, analysis and interpretation of data
9. Discuss about effective management of health information in community diagnosis and intervention
10. Describe the management system of delivery of community health services in rural and urban areas
11. Describe the leadership role in guiding, supervising, and monitoring the health services and the personnel at the PHCs, SCs and community level including financial management and maintenance of records & reports
12. Describe the roles and responsibilities of Mid-Level Health Care Providers (MHCPs) in Health Wellness Centers (HWCs)
13. Identify the roles and responsibilities of health team members and explain their job description
14. Demonstrate initiative in preparing themselves and the community for disaster preparedness and management
15. Demonstrate skills in proper bio-medical waste management as per protocols
16. Explain the roles and functions of various national and international health agencies

COURSE OUTLINE

T – Theory

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
I	10 (T)	Explain nurses' role in identification, primary management and referral of clients with common disorders/ conditions and emergencies including first aid	Management of common conditions and emergencies including first aid • Standing orders: Definition, uses Screening, diagnosing/ identification, primary care and referral of Gastrointestinal System ○ Abdominal pain ○ Nausea and vomiting ○ Diarrhea ○ Constipation ○ Jaundice ○ GI bleeding ○ Abdominal distension ○ Dysphagia and dyspepsia ○ Aphthous ulcers Respiratory System ○ Acute upper respiratory infections – Rhinitis, Sinusitis, Pharyngitis, Laryngitis, Tonsillitis ○ Acute lower respiratory infections – Bronchitis, pneumonia and bronchial asthma ○ Hemoptysis, Acute chest pain Heart & Blood ○ Common heart diseases – Heart attack/coronary artery disease, heart failure, arrhythmia ○ Blood anemia, blood cancers, bleeding disorders Eye & ENT conditions • Eye – local infections, redness of eye, conjunctivitis, stye, trachoma and refractive errors • ENT – Epistaxis, ASOM, sore throat, deafness Urinary System • Urinary tract infections – cystitis, pyelonephritis, prostatitis, UTIs in children First aid in common emergency conditions – Review • High fever, low blood sugar, minor injuries, fractures, fainting, bleeding, shock, stroke, bites, burns, choking, seizures, RTAs, poisoning, drowning and foreign bodies	• Lecture • Discussion • Demonstration • Role play • Suggested field visits • Field practice • Assessment of clients with common conditions and provide referral	• Short answer • Essay • Field visit reports • OSCE assessment

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
II	20 (T)	Provide reproductive, maternal, newborn and childcare, including adolescent care in the urban and rural health care settings	Reproductive, maternal, newborn, child and adolescent Health (Review from OBG Nursing and application in community setting) • Present situation of reproductive, maternal and child health in India Antenatal care • Objectives, antenatal visits and examination, nutrition during pregnancy, counseling • Calcium and iron supplementation in pregnancy • Antenatal care at health centre level • Birth preparedness • High risk approach – Screening/early identification and primary management of complications – Antepartum hemorrhage, pre-eclampsia, eclampsia, Anemia, Gestational diabetes mellitus, Hypothyroidism, Syphilis • Referral, follow up and maintenance of records and reports Intra natal care • Normal labour – process, onset, stages of labour • Monitoring and active management of different stages of labour • Care of women after labour • Early identification, primary management, referral and follow up – preterm labour, fetal distress, prolonged and obstructed labour, vaginal & perineal tears, ruptured uterus • Care of newborn immediately after birth • Maintenance of records and reports • Use of Safe child birth check list • SBA module – Review • Organization of labour room Postpartum care • Objectives, Postnatal visits, care of mother and baby, breast feeding, diet during lactation, and health counseling • Early identification, primary management, referral and follow up of complications, Danger signs-postpartum hemorrhage, shock, puerperal sepsis, breast conditions, post-partum depression • Postpartum visit by health care provider	• Lecture • Discussion • Demonstration • Role play • Suggested field visits and field practice • Assessment of antenatal, postnatal, newborn, infant, preschool child, school child, and adolescent health	• Short answer • Essay • OSCE assessment

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
		Promote adolescent health and youth friendly services	Newborn and child care • Review: Essential newborn care • Management of common neonatal problems • Management of common child health problems: Pneumonia, Diarrhoea, Sepsis, screening for congenital anomalies and referral • Review: IMNCI Module • Under five clinics Adolescent Health • Common health problems and risk factors in adolescent girls and boys • Common Gynecological conditions – dysmenorrhea, Premenstrual Syndrome (PMS), Vaginal discharge, Mastitis, Breast lump, pelvic pain, pelvic organ prolapse • Teenage pregnancy, awareness about legal age of marriage, nutritional status of adolescents National Menstrual Hygiene scheme • Youth friendly services: ◦ SRH Service needs ◦ Role and attitude of nurses: Privacy, confidentiality, non judgemental attitude, client autonomy, respectful care and communication • Counseling for parents and teenagers (BCS – balanced counseling strategy) National Programs • RMNCH+A Approach – Aims, Health systems strengthening, RMNCH+A strategies, Interventions across life stages, program management, monitoring and evaluation systems • Universal Immunization Program (UIP) as per Government of India guidelines – Review • Rashtriya Bal Swasthya Karyakram (RSBK) – children • Rashtriya Kishor Swasthya Karyakram (RKSK) – adolescents Any other new programs	• Screen, manage and refer adolescents • Counsel adolescents	

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
III	4 (T)	Discuss the concepts and scope of demography	Demography, Surveillance and Interpretation of Data • <i>Demography and vital statistics</i> – demographic cycle, world population trends, vital statistics • Sex ratio and child sex ratio, trends of sex ratio in India, the causes and social implications • <i>Sources of vital statistics</i> – Census, registration of vital events, sample registration system • <i>Morbidity and mortality indicators</i> – Definition, calculation and interpretation • Surveillance, Integrated disease surveillance project (IDSP), Organization of IDSP, flow of information and mother and child tracking system (MCTS) in India • Collection, analysis, interpretation, use of data • <i>Review</i>: Common sampling techniques – random and nonrandom techniques • Disaggregation of data	• Lecture • Discussion • Demonstration • Role play • Suggested field visits • Field practice	• Short answer • Essay
IV	6 (T)	Discuss population explosion and its impact on social and economic development of India Describe the various methods of population control	Population and its Control • Population Explosion and its impact on Social, Economic development of individual, society and country. • Population Control – Women Empowerment; Social, Economic and Educational Development • Limiting Family Size – Promotion of small family norm, Temporary Spacing Methods (natural, biological, chemical, mechanical methods etc.), Terminal Methods (Tubectomy, Vasectomy) • Emergency Contraception • Counseling in reproductive, sexual health including problems of adolescents • Medical Termination of pregnancy and MTP Act • National Population Stabilization Fund/JSK (Jansankhya Sthirata Kosh) • Family planning 2020 • National Family Welfare Program • Role of a nurse in Family Welfare Program	• Lecture • Discussion • Demonstration • Role play • Suggested field visits • Field practice	• Short answer • Essay • OSCE assessment • Counseling on family planning
V	5 (T)	Describe occupational health hazards, occupational diseases and the role of nurses in	Occupational Health • Occupational health hazards • Occupational diseases • ESI Act	• Lecture • Discussion • Demonstration • Role play	• Essay • Short answer • Clinical performance

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
		occupational health programs	- National/ State Occupational Health Programs - Role of a nurse in occupational health services – Screening, diagnosing, management and referral of clients with occupational health problems	- Suggested field visits - Field practice	evaluation
VI	6 (T)	Identify health problems of older adults and provide primary care, counseling and supportive health services	Geriatric Health Care - Health problems of older adults - Management of common geriatric ailments: counseling, supportive treatment of older adults - Organization of geriatric health services - National program for health care of elderly (NPHCE) - State level programs/Schemes for older adults - Role of a community health nurse in geriatric health services – Screening, diagnosing, management and referral of older adults with health problems	- Lecture - Discussion - Demonstration	- Visit report on elderly home - Essay - Short answer
VII	6 (T)	Describe screening for mental health problems in the community, take preventive measures and provide appropriate referral services	Mental Health Disorders - Screening, management, prevention and referral for mental health disorders - Review: - Depression, anxiety, acute psychosis, Schizophrenia - Dementia - Suicide - Alcohol and substance abuse - Drug deaddiction program - National Mental Health Program - National Mental Health Policy - National Mental Health Act - Role of a community health nurse in screening, initiation of treatment and follow up of mentally ill clients	- Lecture - Discussion - Demonstration - Role play - Health counseling on promotion of mental health - Suggested field visits - Field practice	- Essay - Short answer - Counseling report
VIII	4 (T)	Discuss about effective management of health information in community diagnosis and intervention	Health Management Information System (HMIS) - Introduction to health management system: data elements, recording and reporting formats, data quality issues - Review: - Basic Demography and vital statistics - Sources of vital statistics - Common sampling techniques, frequency distribution	- Lecture - Discussion - Demonstration - Role play - Suggested field visits - Field practice - Group project on community diagnosis – data	- Group project report - Essay - Short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
			- Collection, analysis, interpretation of data - Analysis of data for community needs assessment and preparation of health action plan	management	
IX	12 (T)	Describe the system management of delivery of community health services in rural and urban areas	Management of delivery of community health services: - Planning, budgeting and material management of CHC, PHC, SC/HWC Manpower planning as per IPHS standards Rural: Organization, staffing and material management of rural health services provided by Government at village, SC/HWC, PHC, CHC, hospitals – district, state and central Urban: Organization, staffing, and functions of urban health services provided by Government at slums, dispensaries, special clinics, municipal and corporate hospitals - Defense services - Institutional services - Other systems of medicine and health: Indian system of medicine, AYUSH clinics, Alternative health care system referral systems, Indigenous health services	- Lecture - Discussion - Visits to various health care delivery systems - Supervised field practice	- Essay - Short answer - Filed visit reports
X	15 (T)	Describe the leadership role in guiding, supervising, and monitoring the health services and the personnel at the PHCs, SCs and community level including financial management Describe the roles and responsibilities of Mid-Level Health Care Providers (MHCPs) in Health Wellness Centers (HWCs)	Leadership, Supervision and Monitoring - Understanding work responsibilities/job description of DPHN, Health Visitor, PHN, MPHW (Female), Multipurpose health Worker (Male), AWWs and ASHA - Roles and responsibilities of Mid-Level Health Care Providers (MLHPs) - Village Health Sanitation and Nutrition Committees (VHSNC): objectives, composition and roles & responsibilities - Health team management - Review: Leadership & supervision – concepts, principles & methods - Leadership in health: leadership approaches in healthcare setting, taking control of health of community and organizing health camps, village clinics - Training, Supportive supervision and monitoring – concepts, principles and process e.g. performance of frontline health workers Financial Management and Accounting & Computing at Health Centers (SC) - Activities for which funds are received	- Lecture - Discussion - Demonstration - Role play - Suggested field visits - Field practice	- Report on interaction with MPHWS, HVs, ASHA, AWWs - Participation in training programs - Essay - Short answer

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
			- Accounting and book keeping requirements – accounting principles & policies, book of accounts to be maintained, basic accounting entries, accounting process, payments & expenditure, fixed asset, SOE reporting format, utilization certificate (UC) reporting - Preparing a budget - Audit Records & Reports: - Concepts of records and reports – importance, legal implications, purposes, use of records, principles of record writing, filing of records - Types of records – community related records, registers, guidelines for maintaining - Report writing – purposes, documentation of activities, types of reports - Medical Records Department – functions, filing and retention of medical records - Electronic Medical Records (EMR) – capabilities and components of EMR, electronic health record (EHR), levels of automation, attributes, benefits and disadvantages of HER - Nurses' responsibility in record keeping and reporting		
XI	6 (T)	Demonstrate initiative in preparing themselves and the community for disaster preparedness and management	Disaster Management - Disaster types and magnitude - Disaster preparedness - Emergency preparedness - Common problems during disasters and methods to overcome - Basic disaster supplies kit - Disaster response including emergency relief measures and Life saving techniques Use disaster management module	- Lecture - Discussion - Demonstration - Role play - Suggested field visits, and field practice - Mock drills - Refer Disaster module (NDMA) National Disaster/INC – Reaching out in emergencies	
XII	3 (T)	Describe the importance of bio-medical waste management, its process and management	Bio-Medical Waste Management - Waste collection, segregation, transportation and management in the community - Waste management in health center/clinics - Bio-medical waste management guidelines – 2016, 2018 (Review)	- Lecture cum Discussion - Field visit to waste management site	Field visit report
XIII	3 (T)	Explain the roles and functions of	Health Agencies	Lecture	Essay

Unit	Time (Hrs)	Learning Outcomes	Content	Teaching / Learning Activities	Assessment Methods
		various national and international health agencies	International: WHO, UNFPA, UNDP, World Bank, FAO, UNICEF, European Commission, Red Cross, USAID, UNESCO, ILO, CAR, CIDA, JHPIEGO, any other National: Indian Red Cross, Indian Council for Child Welfare, Family Planning Association of India, Tuberculosis Association of India, Central Social Welfare Board, All India Women's Conference, Blind Association of India, any other Voluntary Health Association of India (VHA)	- Discussion - Field visits	Short answer

COMMUNITY HEALTH NURSING II

Clinical practicum – 2 credits (160 hours)

CLINICAL POSTINGS (4 weeks × 40 hours per week)

Clinical Area	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
Urban	2 weeks	Screen, diagnose, manage and refer clients with common conditions/ emergencies	Screening, diagnosing, management and referral of clients with common conditions/ emergencies	Screening, diagnosing, Primary management and care based on standing orders/protocols approved by MOH&FW	Clinical performance assessment
Rural	2 Weeks	Assess and provide antenatal, intrapartum, postnatal and new-born care	- Assessment (physical & nutritional) of antenatal, intrapartum, postnatal and newborn - Conduction of normal delivery at health center - Newborn care - Counsel adolescents - Family planning counselling - Distribution of temporary contraceptives – condoms, OCP's, emergency contraceptives	- Minor ailments – 2 - Emergencies – 1 - Dental problems – 1 - Eye problems – 1 - Ear, nose, and throat problems – 1 - High risk pregnant woman – 1 - High risk neonate – 1 - Assessment of antenatal – 1, intrapartum – 1, postnatal – 1 and newborn – 1 - Conduction of normal delivery at health center and documentation – 2 - Immediate newborn care and documentation – 1 - Adolescent counseling – 1 - Family planning counselling –	- OSCE during posting - Final clinical examination (University) - Clinical performance assessment - OSCE
		Promote adolescent health			

Clinical Area	Duration (Weeks)	Learning Outcomes	Procedural Competencies/ Clinical Skills	Clinical Requirements	Assessment Methods
		Provide family welfare services Screen, diagnose, manage and refer clients with occupational health problem Screen, assess and manage elderly with health problems and refer appropriately Screen, diagnose, manage and refer clients who are mentally unhealthy Participate in community diagnosis – data management Participate in health centre activities Organize and conduct clinics/health camps in the community Prepare for disaster preparedness and management Recognize the importance and observe the biomedical waste management process	- Screening, diagnosing, management and referral of clients with occupational health problems - Health assessment of elderly - Mental health screening - Participation in Community diagnosis – data management - Writing health center activity report - Organizing and conducting clinics/camp - Participation in disaster mock drills	1 - Family case study – 1 (Rural/Urban) - Screening, diagnosing, management and referral of clients with occupational health problems – 1 - Health assessment (Physical & nutritional) of elderly – 1 - Mental health screening survey – 1 Group project: Community diagnosis – data management - Write report on health center activities – 1 - Organizing and conducting Antenatal/under-five clinic/Health camp – 1 - Participation in disaster mock drills - Field visit to bio-medical waste management site - Visit to AYUSH clinic	- Family Case study evaluation - Clinical performance evaluation - OSCE - Project evaluation

NURSING RESEARCH AND STATISTICS

PLACEMENT: VII SEMESTER

THEORY: 2 Credits (40 hours)

PRACTICUM: Lab/Skill Lab: 1 Credit (40 hours) Clinical Project: 40 hours

DESCRIPTION: The Course is designed to enable students to develop an understanding of basic concepts of research, research process and statistics. It is further, structured to conduct/ participate in need-based research studies in various settings and utilize the research findings to provide quality nursing care. The hours for practical will be utilized for conducting individual/group research project.

COMPETENCIES: On completion of the course, students will be competent to

1. Identify research priority areas
2. Formulate research questions/problem statement/hypotheses
3. Review related literature on selected research problem and prepare annotated bibliography
4. Prepare sample data collection tool
5. Analyze and interpret the given data
6. Practice computing, descriptive statistics and correlation
7. Draw figures and types of graphs on given select data
8. Develop a research proposal
9. Plan and conduct a group/individual research project

COURSE OUTLINE

T – Theory, P – Practicum

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
I	6		Describe the concept of research, terms, need and areas of research in nursing Explain the steps of research process State the purposes and steps of Evidence Based Practice	Research and Research Process • Introduction and need for nursing research • Definition of Research & nursing research • Steps of scientific method • Characteristics of good research • Steps of Research process – overview • Evidence Based Practice – Concept, Meaning, Purposes, Steps of EBP Process and Barriers	• Lecture cum Discussion • Narrate steps of research process followed from examples of published studies • Identify research priorities on a given area/ specialty • List examples of Evidence Based Practice	• Short answer • Objective type
II	2	8	Identify and state the research problem and objectives	Research Problem/Question • Identification of problem area • Problem statement • Criteria of a good research problem • Writing objectives and hypotheses	• Lecture cum Discussion • Exercise on writing statement of problem and objectives	• Short answer • Objective type • Formulation of research questions/ objectives/ hypothesis

Unit	Time (Hrs.)		Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
	T	P				
			and graphical presentation of data Describe the measures of central tendency and variability and methods of Correlation	- Frequency distribution and graphical presentation of data - Mean, Median, Mode, Standard deviation - Normal Probability and tests of significance - Co-efficient of correlation - Statistical packages and its application	- graphical presentations - Practice on computation of measures of central tendency, variability & correlation	descriptive statistics
VIII	4	5 40 Hrs (Clinical Project)	Communicate and utilize the research findings	Communication and utilization of Research - Communication of research findings - Verbal report - Writing research report - Writing scientific article/paper - Critical review of published research including publication ethics - Utilization of research findings - Conducting group research project	- Lecture cum Discussion - Read/ Presentations of a sample published/ unpublished research report - Plan, conduct and Write individual/group research project	- Short answer - Objective type - Oral Presentation - Development of research proposal - Assessment of research Project

MIDWIFERY/OBSTETRIC AND GYNECOLOGY NURSING - II
including Safe Delivery App Module

PLACEMENT: VII SEMESTER

THEORY: 3 Credits (60 hours)

PRACTICUM: Skill Lab: 1 Credit (40 Hours) Clinical: 4 Credits (320 Hours)

DESCRIPTION: This course is designed for students to develop knowledge and competencies on the concepts and principles of obstetric and gynecology nursing. It helps them to acquire knowledge and skills in rendering respectful maternity care to high risk woman during antenatal, natal and postnatal periods in hospitals and community settings and help to develop skills in initial management and referral of high risk neonates. It would also help students to gain knowledge, attitude and skills in caring for women with gynecological disorders.

COMPETENCIES: On completion of the course, the students will be able to:

1. Describe the assessment, initial management, referral and respectful maternity care of women with high risk pregnancy.
2. Demonstrate competency in identifying deviation from normal pregnancy.
3. Describe the assessment, initial management, referral and nursing care of women with high risk labour.
4. Assist in the conduction of abnormal vaginal deliveries and caesarean section.
5. Describe the assessment, initial management, referral and nursing care of women with abnormal postnatal conditions.
6. Demonstrate competency in the initial management of complications during the postnatal period.
7. Demonstrate competency in providing care for high risk newborn.
8. Apply nursing process in caring for high risk women and their families.
9. Describe the assessment and management of women with gynecological disorders.

10. Demonstrate skills in performing and assisting in specific gynecological procedures.
11. Describe the drugs used in obstetrics and gynecology.
12. Counsel and care for couples with infertility.
13. Describe artificial reproductive technology.

COURSE OUTLINE

T – Theory, SL/L – Skill Lab, C – Clinical

Unit	Time (Hrs.)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
I	12 (T) 10 (L) 80 (C)	Describe the assessment, initial management, and referral of women with problems during pregnancy Support women with complicated pregnancy and facilitate safe and positive birthing outcome	Recognition and Management of problems during Pregnancy - Assessment of high-risk pregnancy Problems/Complications of Pregnancy - Hyper-emesis gravidarum, - Bleeding in early pregnancy – abortion, ectopic pregnancy, vesicular mole - Unintended or mistimed pregnancy - Post abortion care & counseling - Bleeding in late pregnancy placenta previa, abruption placenta, trauma - Medical conditions complicating pregnancy – Anemia, PIH/Pre-eclampsia, Eclampsia, GDM, cardiac disease, pulmonary disease, thyrotoxicosis, STDs, HIV, Rh incompatibility - Infections in pregnancy – urinary tract infection, bacterial, viral, protozoal, fungal, malaria in pregnancy - Surgical conditions complicating pregnancy – appendicitis, acute abdomen - COVID-19 & pregnancy and children - Hydramnios - Multiple pregnancy - Abnormalities of placenta and cord - Intra uterine growth restriction - Intra uterine fetal death - Gynaecological conditions complicating pregnancy - Mental health issues during pregnancy - Adolescent pregnancy - Elderly primi, grand multiparity - Management and care of conditions as per the GoI protocol - Policy for the referral services	- Lecture - Discussion - Demonstration - Video & films - Scan reports - Case discussion - Case presentation - Drug presentation - Health talk - Simulation - Role play - Supervised Clinical practice - WHO midwifery toolkit - GoI guideline – screening for hypothyroidism, screening for syphilis, deworming during pregnancy, diagnosis and management of GDM	- Essay - Short answer - Objective type - Assessment of skills with check list - OSCE

Unit	Time (Hrs.)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Drugs used in management of high-risk pregnancies • Maintenance of records and reports		
II	20 (T) 15 (L) 80 (C)	Identify, provide initial management and refer women with problems during labour within the scope of midwifery practice.	Recognition and management of abnormal labour • Preterm labour – Prevention and management of preterm labour; (Use of antenatal corticosteroids in preterm labour) • Premature rupture of membranes • Malposition's and abnormal presentations (posterior position, breech, brow, face, shoulder) • Contracted Pelvis, Cephalo Pelvic Disproportion (CPD) • Disorders of uterine action – Prolonged labour, Precipitate labour, Dysfunctional labour • Complications of third stage – Retained placenta, Injuries to birth canal, Postpartum hemorrhage (bimanual compression of the uterus, aortic compression, uterine balloon tamponade) • Obstetric emergencies – Foetal distress, Ruptured uterus, Cord prolapse, Shoulder dystocia, Uterine inversion, Vasa previa, Obstetrical shock, Amniotic fluid embolism • Episiotomy and suturing • Obstetric procedures – Forceps delivery, Vacuum delivery, Version • Induction of labour – Medical & surgical • Caesarean section – indications and preparation • Nursing management of women undergoing • Obstetric operations and procedures • Drugs used in management of abnormal labour • Anesthesia and analgesia in obstetrics	• Lecture • Discussion • Demonstration • Case discussion/ presentation • Simulation • Role play • Drug presentation • Supervised clinical practice • WHO midwifery toolkit • Gol guidelines – use of uterotonics during labour, antenatal corticosteroids • Gol guidance note on prevention and management of PPH	• Essay • Short answer • Objective type • Assessment of skills with check list • OSCE
III	9 (T) 5 (L) 40 (C)	Describe the assessment, initial management, referral and nursing care of women with abnormal postnatal conditions.	Recognition and Management of postnatal problems • Physical examination, identification of deviation from normal • Puerperal complications and its management ◦ Puerperal pyrexia ◦ Puerperal sepsis	• Lecture • Demonstration • Case discussion/ presentation • Drug presentation • Supervised clinical practice	• Quiz • Simulation • Short answer • OSCE

Unit	Time (Hrs.)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			○ Urinary complications ○ Secondary Postpartum hemorrhage ○ Vulval hematoma ○ Breast engorgement including mastitis/breast abscess, feeding problem ○ Thrombophlebitis ○ DVT ○ Uterine sub involution ○ Vesico vaginal fistula (VVF), Recto vaginal fistula (RVF) ○ Postpartum depression/psychosis • Drugs used in abnormal puerperium • Policy about referral		
IV	7 (T) 5 (L) 40 (C)	Describe high risk neonates and their nursing management	Assessment and management of High-risk newborn (Review) • Models of newborn care in India – NBCC, SNCUs • Screening of high-risk newborn • Protocols, levels of neonatal care, infection control • Prematurity, Post-maturity • Low birth weight • Kangaroo Mother Care • Birth asphyxia/Hypoxic encephalopathy • Neonatal sepsis • Hypothermia • Respiratory distress • Jaundice • Neonatal infections • High fever • Convulsions • Neonatal tetanus • Congenital anomalies • Baby of HIV positive mothers • Baby of Rh negative mothers • Birth injuries • SIDS (Sudden Infant Death Syndrome) prevention, Compassionate care • Calculation of fluid requirements, EBM/formula feeds/tube feeding • Home based newborn care program -	• Lecture • Discussion • Demonstration • Simulation • Case discussion/ presentation • Drug presentation • Supervised Clinical practice • Integrated Management of Neonatal Childhood Illnesses (IMNCI)	• Short answer • Objective type • Assessment of skills with check list • OSCE

Unit	Time (Hrs.)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			community facility integration in newborn care • Decision making about management and referral • Bereavement counseling • Drugs used for high risk newborns • Maintenance of records and reports		
V	12 (T) 5 (L) 80 (C)	Describe the assessment and management of women with gynecological disorders.	Assessment and management of women with gynecological disorders • Gynecological assessment – History and Physical assessment • Breast Self-Examination • Congenital abnormalities of female reproductive system • Etiology, pathophysiology, clinical manifestations, diagnosis, treatment modalities and management of women with ◦ Menstrual abnormalities ◦ Abnormal uterine bleed ◦ Pelvic inflammatory disease ◦ Infections of the reproductive tract ◦ Uterine displacement ◦ Endometriosis ◦ Uterine and cervical fibroids and polyps ◦ Tumors – uterine, cervical, ovarian, vaginal, vulval ◦ Cysts – ovarian, vulval ◦ Cystocele, urethrocele, rectocele ◦ Genitor-urinary fistulas ◦ Breast disorders – infections, deformities, cysts, tumors ◦ HPV vaccination ◦ Disorders of Puberty and menopause ◦ Hormonal replacement therapy • Assessment and management of couples with infertility ◦ Infertility – definition, causes ◦ Counseling the infertile couple ◦ Investigations – male and female ◦ Artificial reproductive technology ◦ Surrogacy, sperm and ovum donation, cryopreservation	• Lecture • Discussion • Demonstration • Case discussion/ presentation • Drug presentation • Videos, films • Simulated practice • Supervised Clinical practice • Visit to infertility clinic and ART centers	• Essay • Short answer • Objective type • Assessment of skills with check list • OSCE

Unit	Time (Hrs.)	Learning Outcomes	Content	Teaching/ Learning Activities	Assessment Methods
			• Adoption – counseling, procedures • Injuries and Trauma, Sexual violence • Drugs used in treatment of gynaecological disorders		

"Annexure -C"

DETAILED SYLLABUS FOR THE POST OF E.E.G TECHNICIAN GRADE II (MEDICAL EDUCATION)

(Cat.No.410/2022)

Module 1 : Anatomy and Physiology -

- i. Skeletal System: Classification and types of bones, names and parts of bones, blood supply, ossification of bone, definition, types of joints and classification, major joints of human body, movements of joints
- ii. Muscular system: Components of muscle, types of muscles based on function, structure, nervous control, and activity, innervation, reflexes, names of the major limb, truncal and facial muscles and their principal actions on joints, muscles of respiration, mastication, eye, larynx, pharynx
- iii. Nervous system: General organization of nervous system. Structure of a neuron and Synapse, Name and functions of glial cells, General description of autonomic nervous system, Classification of peripheral and central nervous system. names of cranial and spinal nerves, dermatomal distribution of body, cutaneous innervation. Central nervous system – General organization of central nervous system, General organization of parts of brain, layers and functions of meninges, Parts of spinal cord, enlargements, coverings, blood supply. Lumbar puncture – site, procedure and complications, Parts of brainstem: External features, blood supply, Cerebellum: External features and major nuclei of cerebellum, blood supply, function. Cerebrum: lobes and its functions , Sulci and Gyri, blood supply, External features of medial surface, inferior surface and Supero-lateral surface of cerebrum. Thalamus and Hypothalamus – Location, Parts and function, Basal nuclei – parts, function and its applied aspect, White fibres: classification and Names of the white fibres, Parts of corpus callosum, Parts of internal capsule and its function. Ventricles of brain and circulation of CSF. Peripheral nervous system – General organization, origin and classification of peripheral nerves, roots, plexus and individual peripheral nerves – course and distribution, peripheral receptors, neuromuscular junction and muscles.
- iv. Muscle: Structure in brief, mechanism of muscle contraction, isotonic and isometric contractions, energy sources of muscle contractions, motor unit.

- v. Nerve and Central Nervous System: Structure of a neuron, nerve impulse, myelinated and non-myelinated nerve. Brief account of resting membrane potential, action potential and conduction of nerve impulse. Neuro-muscular transmission. Various parts of central nervous system, C.S.F., Functions of muscle spindle and motor tracts including reflexes, cutaneous receptors, joint receptors, sensory pathways. Ascending reticular formation, EEG, functions of cerebellum, basal ganglia, thalamus & hypothalamus, vestibular apparatus and functions. Autonomic Nervous System: Divisions and functions.

Module 2 : Basic Physics and computer applications – 10 Marks

1. Mechanics and laws of motion: Laws of motion, Oscillations and simple harmonic motion, Lissajous figures, Damped, forced harmonic oscillator, coupled oscillators, motion of charged particles in electrical and magnetic fields
2. Electricity, magnetism and electromagnetic theory: Electrostatics, electric field, electric potential, electric currents, magnetic fields
3. Kinetic theory of matter
4. Waves, acoustics, and optics
5. Solid state physics, solid state electronics
6. Concepts of computers, Hardware and Software, Trends and Technology, Application of Computers

Module 3 : Biophysics and Electronics - 10 Marks

1. Resistors, Capacitors, transistor
2. Filters, Analog – Digital Converter, Sampling Rate, Amplifiers
3. Simple Circuits
4. Impedance
5. Electrical Safety
6. Transducers
7. Basics of Electronics
8. Block Diagrams of EEG Machine, ENMG Machine, EP systems
9. Storage Devices
10. Creation of files and folders and Storing data

- 7) Needle EMG study
- 8) Normal EMG patterns
- 9) Repetitive nerve stimulation
- 10) Sympathetic skin response
- 11) Blink Reflex
- 12) Sterilization of ENMG electrodes and care of Electrodes
- 13) Safety precautions in ENMG lab

Module 6 : dvanced electroencephalography and advanced electromyography - ~~2020~~

1. Nerve Conductions in pathological states: Demyelination, Axonopathy, Entrapment neuropathy, Plexopathy, Radiculopathy
2. Long loop reflexes
3. Electromyography: Qualitative EMG, Quantitative EMG, EMG in myopathy and neuropathy, Single fiber EMG, Macro EMG, Turns amplitude ratio
4. Evoked Potentials: Visual Evoked potential (VEP), Brainstem Auditory Evoked Potential(BAEP), Somatosensory evoked potential (SSEP), Motor Evoked Potential (MEP)
5. Event related potentials
6. Electroconvulsive therapy
7. Surface recording of EMG in movement disorder
8. EMG recordings in intensive care units
9. Pediatric EEG and EEG maturation
10. EEG patterns in generalized and focal seizures, epilepsy syndromes, ictal rhythms
11. EEG in metabolic disease of cerebrum
12. EEG changes in CNS infections
13. EEG in head trauma, strokes, tumors

11. Simple Circuits
12. Maintenance of systems and accessories
13. Block diagrams of EEG, ENMG systems
14. Electrode maintenance, Electrode application
15. Basic electricity and electronics
16. Role of technologists

Module 4 : Basics of Electroencephalography – ~~10 Marks~~

1. Physiological basis of EEG
2. Principles, methodology, interpretation and clinical applications of the procedures listed.
 - i. Electroencephalography (EEG)
 - ii. Terminology, waveforms, frequencies and artifacts
 - iii. Polarity and montages
 - iv. Technical specification of the international 10-20 system of EEG . Minimal technical requirements for EEG, EP of American EEG society
 - v. Historical aspects of EEG and EP recording- conventions and procedures
 - vi. Normal EEG and benign variants
 - vii. Activation procedures and specialized recording techniques
 - viii. Normal EEG maturation; EEG resting, sleep, activation procedures.
 - ix. Artifacts and rectification.

Module 5 : Basics of Nerve conduction studies and electromyography- ~~10 Marks~~

- 1) Membrane action potential and signal transmission: nerve action potential, motor units, nerve signal transmission
- 2) Excitation-contraction coupling, Physiology of different types of muscles
- 3) Physiological basis of EMG and NCV Principles, methodology, interpretation and clinical applications of the procedures listed.
- 4) Prerequisites of nerve conduction study
- 5) Normal nerve conduction parameters
- 6) F wave response and H reflex

COMPETENCY ASSESSMENT: (VIII SEMESTER)**Internal assessment**

Clinical performance evaluation – 10×5 specialty = 50 marks

OSCE = 10×5 specialty = 50 marks

Total = 5 specialty $\times$ 20 marks = 100

APPENDIX 3**I. UNIVERSITY THEORY QUESTION PAPER PATTERN (For 75 marks)****1. Section A – 37 marks and Section B – 38 marks**

- a. **Applied Anatomy & Applied Physiology:** Applied Anatomy – Section A and Applied Physiology – Section B.
- b. **Applied Sociology & Applied Psychology:** Applied Sociology – Section A and Applied Psychology – Section B
- c. **Applied Microbiology & Infection Control including Safety:** Applied Microbiology – Section A and Infection Control including Safety – Section B

Section A (37 marks)

MCQ – $6 \times 1 = 6$

Essay – $1 \times 10 = 10$

Short – $3 \times 5 = 15$

Very Short – $3 \times 2 = 6$

Section B (38 marks)

MCQ – $7 \times 1 = 7$

Essay – $1 \times 10 = 10$

Short – $3 \times 5 = 15$

Very Short – $3 \times 2 = 6$

2. Section A – 25 marks and Section B – 50 marks

Applied Biochemistry & Nutrition & Dietetics: Applied Biochemistry – Section A and Applied Nutrition & Dietetics – Section B

Section A (25 marks)

MCQ – $4 \times 1 = 4$

Short – $3 \times 5 = 15$

Very Short – $3 \times 2 = 6$

Section B (50 marks)

MCQ – $8 \times 1 = 8$

Essay/situation type – $1 \times 10 = 10$

Short – $4 \times 5 = 20$

Very Short – $6 \times 2 = 12$

3. Section A – 38 marks, Section B – 25 marks and Section C – 12 marks

Pharmacology, Pathology and Genetics: Pharmacology – Section A, Pathology – Section B and Genetics – Section C

Section A (38 marks)

MCQ – $7 \times 1 = 7$

Essay – $1 \times 10 = 10$

Short – $3 \times 5 = 15$

Very Short – $3 \times 2 = 6$

Section B (25 marks)

MCQ – $4 \times 1 = 4$

Short – $3 \times 5 = 15$

Very Short – $3 \times 2 = 6$

Section C (12 marks)

MCQ – $3 \times 1 = 3$

Short – $1 \times 5 = 5$

Very Short – $2 \times 2 = 4$

4. Section A – 55 marks and Section B – 20 marks

Research and Statistics: Research – Section A and Statistics – Section B

Section A (55 marks)

MCQ – $9 \times 1 = 9$

Essay/situation type – $2 \times 15 = 30$

Short – $2 \times 5 = 10$

Very Short – $3 \times 2 = 6$

Section B (20 marks)

MCQ – $4 \times 1 = 4$

Short – $2 \times 5 = 10$

Very Short – $3 \times 2 = 6$

5. Marks 75 (For all other university exams with 75 marks)

MCQ – $12 \times 1 = 12$

Essay/situation type – $2 \times 15 = 30$

Short – $5 \times 5 = 25$

Very Short – $4 \times 2 = 8$

6. College Exam (End of Semester) – 50 marks (50/2 = 25 marks)

MCQ – $8 \times 1 = 8$

Essay/situation type – $1 \times 10 = 10$

Short – $4 \times 5 = 20$

Very Short – $6 \times 2 = 12$

II. UNIVERSITY PRACTICAL EXAMINATION – 50 marks

OSCE – 15 marks

DOP – 35 marks

III. COMPETENCY ASSESSMENT – University Exam (VIII SEMESTER)

Integrated OSCE including all 5 specialties (Stations based on every specialty) = 5 specialty $5 \times 20 = 100$ marks

Total of 5 Examiners: external – 2 and internal – 3 (One from each specialty)

Internal examiners may be chosen from college faculty with required qualification or from hospital with required qualification.

14. Video EEG: seizure recording and response checking
15. Sphenoid EEG
16. Invasive EEG monitoring
17. Spike detection and source localization
18. EEG recordings in critical care unit: Emergent EEG recording procedures and techniques,
Status epilepticus, Generalized and lateralized Periodic Discharges
19. Brain death recording
20. Magnetoencephalography

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper

Ist YEAR
PAPER - A

A. ANATOMY & PHYSIOLOGY

1. Elementary Physics & Chemistry
2. Characteristics of Living Matter
3. Structure of Living Matter
4. The Tissues
5. Systems and Various Parts of Human Body
6. Development & Types of Bones
7. Bones of Head & Trunk
8. Bones of the Limbs.
9. Joints of Articulations
10. Structure and action of muscles.
11. The chief muscles of the body.
12. The Brain.
13. The Heart and Blood vessels.
14. The circulatory system.
15. The Lymphatic System
16. The Respiratory System.
17. The Digestive System
18. The Liver, Biliary System and Pancreas.
19. Nutrition & Metabolism

20. Endocrine Glands and Exocrine Glands.
21. The Urinary System.
22. The Nervous System.
23. The Ear
24. The Eye
25. The Skin
26. The Reproductive System.

B. PHARMACOLOGY

1. Introduction - IV fluids, Blood and it's products, surgical nutrition (Enteral & Parenteral)
2. Analgesics & Antipyretics
3. Antibiotics and Disinfectants
4. Anaesthetic agents.

C. BIOCHEMISTRY

1. Introduction
2. Metabolism of Carbohydrate, Protein, Fat
3. Common biochemical examinations.
4. Collection and sending of materials.

D. MICROBIOLOGY:

1. Introduction to common pathogens
2. Bacterial & Viral disorders - transmission & prevention.
3. Principles of diagnosis & sending of materials.

Sterilization and other preventive aspects.

E. SURGICAL INSTRUMENTS

(Including Sterilization and Disinfection, Different Methods, Protection of Patients in Surgery, preparation of patients)

1. Preoperative Consideration

Psychological Support of the Surgical Patient.

2. Protection of the Patient in Surgery.

- Admission Process
- Transfer Procedure Position.
- Environmental Controls
- Electro Surgery
- Operative Records
- Counting Procedure
- Sterilization

- Emergencies & Disasters

3. Surgical Instruments

- Instruments for General Surgery
- Operation of Face & Neck
- Operation of Nose, Throat and accessory Nasal Sinuses
- Ophthalmic Surgery
- Sinuses, Ear and Throat
- Operations on the Chest
- Operations on the Genito-Urinary Tract
- Gynaecological & Obstetric Operations
- Orthopedic Operations
- Neuro-Surgical Operations
- Operations on the Vascular System
- Radium Insertion
- Traumatic Surgery

PAPER - B

A. SURGICAL PROCEDURES:

a. Neck Surgery

- Thyroidectomy
- Parathyroidectomy

b. Breast Procedures

- Breast Biopsy
- Mastectomy

c. Abdominal Extra intestinal Surgery

- Abdominal Laprotomy
- Abdominal Herniography
- Cholecystectomy
- Drainage of Pancreatic Cyst (Pseudo Cyst)
- Pancreatectomy
- Hepatic Resection
- Splenectomy

d. Gastrointestinal Surgery

- Esophagoscopy
- Gastroscopy
- Colonoscopy

- Sigmoidoscopy
- Gastrectomy
- Small Bowel Resection
- Appendectomy
- Colostomy
- Closure of Colostomy
- Haemorrhoidectomy
- Pilonidal Cystectomy and Sinusotomy

e. **Gynaecological and Obstetric Surgery**

- Dilatation of the Cervix and Curettage of the Uterus (D&C)
- Therapeutic Abortion by Suction Curettage
- Abdominal Ligation (Different Procedures)
- Vaginal Hysterectomy
- Laparoscopy
- Total Abdominal Hysterectomy
- Tuboplasty of the Fallopian Tubes
- Caesarian Section

f. **Genito-Urinary Surgery**

- Hypospadias Repair
- Epispadias Repair
- Penile Implant

- Hydrocoelelectomy
- Vasectomy
- Spermatocoelectomy
- Orhectomy
- Cystoscopy
- Transurethral Resection of the Prostate (TURP)
- Open Prostectomy
- Nephrectomy
- Upper Tract Urolithotomy
- Ureterolithotomy, Phelolithotomy, Nephrolithotomy
- Extracorporeal shock Wave Lithotripsy (ESWL)
- Ultrasonic Lithotripsy

g. Thoracic Procedures

- Bronchoscopy
- Mediastioscopy
- Segment Resection of the Lung
- Pulmonary Lobectomy
- Pneumonectomy
- Insertion of Intravenous Endocardial Pacemaker

h. Cardiovascular Surgery

- Carotid Endartectomy

- Abdominal Aortic procedures
- Abdominal Aortic Aneurysmectomy,
- Abdominal Aortic Endartectomy
- By-pass surgery (Different procedures)

i. **Orthopedic Surgery**

- Open Reduction of Carpal Bone Fracture
- Excision of a ganglion
- Carpal Tunnel Release
- Open Reduction of the Humerus
- Open Reduction of the radius and Ulna
- Repair of Recurrent Anterior Dislocation of the Shoulder
- Open Reduction of Fracture of the Humerus Head.
- Internal Fixation of the Hip
- Femoral Head prosthetic Replacement
- Total Hip Replacement
- Open Reduction of the Femoral Shaft
- Total Ankle Joint Replacement
- Open Reduction of Ankle
- Arthrotomy of the Knee
- Total Knee Replacement

- Open Reduction of the Tibial Shaft
- Procedure for Correction of Scoliosis.
- Amputation of Lower Extremity

J. Neurological Surgery

- Craniotomy
- Cranioplasty
- Transphenodal Hypophysectomy
- Ventricular Shunts
- Laminectomy

2nd YEAR
PAPER - A

1. Plastic Surgery

- Cleft Lip Repair
- Cleft Palate Repair
- Reduction of Nasal Fracture
- Reduction of Mandibular Fracture
- Reduction of Zygomatic Fracture
- Open Reduction of an orbital Floor Fracture
- Rhinoplasty
- Digital Flexor tendon repair
- Peripheral nerve repair
- Palmar fasciectomy
- Reduction Mamoplasty
- Abdominoplasty / Abdominal Liposuction
- Liposuction

2. Otorhinolaryngologic (ENT) Surgery

- Myringotomy
- Mastoidectomy
- Tympanoplasty
- Stapedectomy
- Submucous resection of nasal septum/
septoplasty
- Nasoantral Wall
- Nasal Polypectomy
- Drainage of the Frontal Sinus
- Tonsillectomy and adenoidectomy (T and A)
- Laryngectomy

- Radical Neck Dissection

3. Ophthalmic Surgery:

- General Information
- Excision of a Chlazion
- Canthotomy
- Corection of Ectroplon
- Lacrimal Duct Probing
- Correction of Strabismus
- Orbital Extenteration
- Corneal Transplant / Ekeratoplasty
- Cataract Extraction
- Iridectomy
- Trabeculectomy
- Vitrectomy
- Refractive Keratoplasty

4. Pediatric Procedures:

- Pediatric General Information.
- Pediatric Sinusectomy
- Repair of Congenital Diaphragmatic Hernia
- Omphalocele repair.
- Pediatric Umbilical Herniography
- Insertion of a central Venous Catheter (Pediatric)
- Pediatric Gastrostomy
- Relief of Intestinal Obstruction (Pediatric)
- Reduction of Pediatric intususception
- Pediatric Colostomy

PAPER - B**A. DIFFERENT METHODS AND PROCEDURES FOR ANAESTHESIA,**

Preparation of Patient for Anaesthesia, Intensive Care etc.

1. Anaesthesia

- General Information

2. General Anaesthesia**3. Conduction Anaesthesia**

- Spinal
- Epidural
- Caudal
- Local
- Topical

4. Methods for Preparation of the Patients for Anaesthesia: Sterilization, Disinfection and Waste Disposal

1. Sterilization of equipments and instruments. CSSD
2. OT Sterilization
3. Prevention of Transmission & care of Immuno compromised Waste disposal.

5. Surgical Procedures and Monitoring
6. Operation Theatre Ethics / Discipline, Safety for operating room personnel, preparation of instrumental trays, national health programmes & policy and health care delivery system in the country etc.

a. **Safety for operation room personnel**

- In service education
- Body mechanic
- Fatigue factors
- Radiation Safety
- Infection Control
- Chemical hazards

b. **Preparation of Instrumental Trays**

- Major procedures tray
- Basic/Minor procedures tray
- Limited procedures tray
- Thyroid tray
- Long instruments tray
- Biliary Tract procedures tray
- Choledochoscopy tray
- Basic rigid sigmoidoscopy tray
- Gastrointestinal procedures tray

- Cataract Extrecton and Lens procedures tray
- Glaucoma procedures tray
- Basic eye procedures / Laparoscope tray
- Retinal procedures tray

k. Pediatric Tray

- Pediatric major procedures tray
- Pediatric minor procedures tray
- Pediatric gastro intestinal procedures tray.

(With special emphasis on National Health Programmes & Policies including Health Care delivery System of India).

- Rectal procedures tray

c. **Gynaecological and Obstetric Trays**

- Dilatation of the cervix and curettage of the Uterus (D&C Tray)
- Cervical cone tray
- Laparoscopy
- Abdominal Hysterectomy
- Caesarian section tray
- Vaginal Hysterectomy tray

d. **Genito-Urinary Tray**

- Vasectomy tray
- Open Prostatectomy
- Kidney tray

e. **Thoracic Trays**

- Mediastinoscopy tray
- Thoractomy tray
- Pacemaker tray

f. **Cardiovascular trays**

- Vascular procedures tray
- Vascular shunt tray
- Cardiac procedures tray

g. Orthopedic tray

- Basic orthopedic procedures tray
- Minor orthopedic procedures tray
- Bone holding instruments tray
- Hip Retractor tray
- Knee Arthrotomy tray
- Knee or Ankle Anthroscopy tray

h. Neurologic Procedures Tray

- Craniotomy tray
- Laminectomy tray
- Kerrison Rongeurs and Pituitary corceps tray

i. Otorhinolaryngologic (ENT) Tray

- Basic ear procedures tray
- Nasal procedures tray
- Tonsillectomy and Adenoidectomy tray
- Tracheostomy tray
- Antral puncture tray

J. Ophthalmic Trays

- Basic Eye procedures tray
- Eyelid and Conjunctival procedures tray
- Basic eye muscle procedures tray
- Corneal procedures tray



**THE J&K STATE PARA-MEDICAL COUNCIL
GOVERNMENT MEDICAL COLLEGE JAMMU.**

Email: paramedicalcounciljammu@gmail.com

SYLLABUS

Diploma Audiometry / Speech Therapy

➤ Audiology

(Marks 25)

✓ **Sound and Hearing**

- Definition of sound
- Generation and transmission of sound
- Physical and psychological attributes of sound
- Range of human hearing
- Structure of the ear, different parts of the ear
- Age-wise behavioral responses to sound
- Description of hearing
- Functions of hearing, role of hearing in learning

✓ **Hearing Loss**

- Definition and meaning of hearing loss
- Causes and types of hearing loss
- Effects of hearing loss
- Signs & symptoms of hearing loss
- Prevention of hearing loss
- Early identification and its importance
- Associated problems

✓ **Evaluation of hearing**

- Methods of testing hearing, tuning fork, audiometry, parts of an audiometer, audiogram
- Procedure for obtaining an audiogram, different types of audiograms
- Factors that affect hearing evaluation

- Informal testing, methods of screening and different conditions for hearing testing, use of different stimuli in rural set-ups.
- Care and maintenance of equipment, preparation and maintenance of check list
- List of equipment, specifications for the same

✓ **Hearing aids & Earmolds**

- Definition of hearing aid
- Need for a hearing aid
- Different parts of a hearing aid
- Different types of hearing aids
- Earmold, role of earmold, making custom earmolds
- Selection of conventional hearing aids

✓ **Counseling on use, troubleshooting and rehabilitation**

- Use, care and maintenance of hearing aid
- Trouble shooting and minor repairs of hearing aids
- **Counselling –**
 - ✦ On hearing aid acceptance, use and care
 - ✦ On auditory learning
 - ✦ On speech and language intervention
 - ✦ Home training
- Role of Speech and Hearing technician in relation to the school for the deaf/retarded, special schools for spastics speech and hearing units and centres, other rehabilitation centres, P.H.Cs.
- Organization of community awareness programmes, exhibition and selecting the materials required, parent meeting. Team approach and role of speech and hearing technician in the team.
- Early identification, Therapy and follow up
- Government schemes available for the welfare of the handicapped
- List of addresses for referral points

➤ **Speech and Language Pathology**



✓ **Introduction to communication, language & Speech.**

- Definitions of communication, language & speech
- Interrelation between speech, language & hearing
- Prerequisites of communication: speaker, listener, speech chain
- Functions of communication
- Types of language: Non-verbal: signs, symbols, gesture. Verbal: speech

- Parameters of language: orientation to phonology, semantics, syntax & pragmatics
- Parameters of Speech: voice, articulation, fluency, prosody
 - ✦ Voice: pitch, loudness, quality;
 - ✦ -Fluency: rate, continuity, effort;
 - ✦ -Prosody: stress, intonation & rhythm

✓ **Speech mechanism & speech production**

- Structure and functions of the speech mechanism
 - ✦ Nervous system
 - ✦ Respiratory system
 - ✦ Phonatory system
 - ✦ Resonatory system
 - ✦ Articulatory system
- Description of the speech sounds
 - ✦ Voicing
 - ✦ Manner of articulation
 - ✦ Place of articulation

✓ **Acquisition / Development of Language and speech**

- Characteristics of normal speech & language and communication
- Stages in the development of language and the important milestones
- Stages in the acquisition of speech sounds/ phonology & important milestones
- Development of communication
- Factors affecting the acquisition of speech, language & communication

✓ **Disorders of speech and Language**

- Classification of the disorders
- Disorders of language: general behaviours, language characteristics: expressive & receptive
 - ✦ Mental retardation
 - ✦ Autism
 - ✦ Cerebral palsy
 - ✦ Childhood aphasia
 - ✦ Attention Deficit disorder

✓ **Disorders of speech : General Characteristics, symptoms**

- Disorders of speech: general characteristics, symptoms
 - ✦ Disorders of voice: pitch, quality

- ✦ Disorders of articulation: structural, neurological, environmental
- ✦ Disorders of fluency: NNF, stuttering, neurogenic stuttering, cluttering

✓ **Prevention and Early identification of communication disorders**

- Definition, Types of prevention
- General preventive measures
- Checklist/ Tools for prevention and Early identification of communication disorders
- Guidance to parents
- Screening tools/ High Risk Register

➤ **Basic Medical Sciences related to speech & Hearing.**

- ✓ General *introduction*, definitions. Coronal / saggital / plane) Planes. Definition of anatomy, morphology, physiology, histology, embryology.
- ✓ Definition of Cell and organelles, tissue, organ system, specialized tissues like nervous tissue, vascular tissue, muscle and bone tissue
- ✓ Nervous system: Definition of neuron, synapse, reflex action, bio electrical phenomena, action potential, depolarisation, division and functions of the nervous system, brain – general lobes, reticular formations, basal ganglia, cerebellum, circle of willis, cranial nerves, spinal cord, CSF – formation & flow.
- ✓ Circulatory system: Definition of capillaries, arteries, veins, cardiac cycle, blood brain barrier, aneurysm, vascular shock – its reference to aphasia / speech disorders.
- ✓ Respiratory system: General outline, detailed study of trachea, larynx and nasopharynx, mechanism of respiration – internal and external influence, nervous control – vital capacity – tidal volume, residual air, artificial respiration (in brief).
- ✓ Definition of inflammation, infection, tumor – benign & malignant, tissue healing
- ✓ Genetics :introduction – structure of DNA and RNA, karyotyping, family tree (pedigree chart), symbolic representation , inheritance, autosomal dominant, autosomal recessive, sex chromosomal disorders, structural aberrations, mutation (in brief).
- ✓ Endocrine system : Definition of hormone, functions of thyroid hormone, growth hormone, androgen, testosterone and its influence in voice disorders.
- ✓ Anatomy & Physiology of external, middle & inner ear, auditory pathways, vestibular pathway. Diseases of the external middle and inner ear leading to hearing loss: Congenital malformations, traumatic lesions, infections, management of middle ear and Eustachian tube disorders.
- ✓ Other causes of hearing loss – Facial paralysis, Tumors of the cerebello- pontine angle, Acoustic neuroma. Infection and management of inner ear diseases. Cochleo-vestibular diseases and its management.

- Anatomy & Physiology of pharynx & oro-peripheral structures Causes of speech disorder, Disorders of the mouth, Tumors of the jaw and oral cavity, nasopharynx and pharynx, pharyngitis, Diseases of tonsils and adenoids.
- ✓ Oesophageal conditions: Congenital abnormality – Atresia, Tracheo-oesophageal fistula, Stenosis, Short oesophagus. Neoplasm – Benign, Malignant, Lesions of the oral articulatory structures like cleft lip, cleft palate, submucosal cleft, Velopharyngeal incompetence.
 - ✓ Anatomy & Physiology of larynx – physiology of phonation / physiology of respiration.
 - ✓ Congenital diseases of the larynx – difference between an infant and an adult larynx. Stridor – causes of infantile stridor. Disorders of structure – Laryngomalacia, Bifid epiglottis, Laryngeal web, Atresia, fistula, Laryngeal cleft, Tumors and Cysts, Laryngitis, Laryngeal trauma and Stenosis. Neuromuscular dysfunctions of the larynx – Vocal cord palsy, Spastic dysphonia, Hypothyroidism, gastro oesophageal reflux disorders, Laryngectomy, artificial larynx, oesophageal speech, tracheo oesophageal puncture.

➤ Psychology

- ✓ Meaning and definition of psychology - relevance to speech, hearing and language. Child development: motor, emotional, cognitive - intellectual and social, stages & relevance.
- ✓ Mental retardation: definition, causes, assessment and psycho/social and educational implications. Developmental skills - helping the child acquire age appropriate developmental skills. Psychological problems associated with speech and hearing disorders - temper tantrum, hyperactive behaviour, withdrawal tendency, aggressive behaviour, neuroses like phobia, autistic behaviour.
- ✓ Psychological testing - aims, factors affecting testing, developmental schedules, IQ test and their importance.
- ✓ Attitude of parents and of the client towards handicap and rehabilitation procedures.
- ✓ Behaviour therapy and play therapy.

➤ Community Based Rehabilitation

- ✓ Assessment of communication disorders
 - ✦ **Case history** - Importance of case history, Procedure for obtaining case history, Methods of gathering information, Specific information to be collected w.r.t various disorders, Relevance of information to be included in case history, Identification, history and description of problem, Counter check of information gathered, Do's and Don'ts while taking case history
 - ✦ Arriving at provisional diagnosis by collecting and collating different information, Measures to be taken when contradictory findings are found
 - ✦ Making appropriate referrals to other relevant professionals, Ways of referral-reporting & requesting and informing parents/caregivers on diagnosis and prognosis.
 - ✦ Role of observation therapy in diagnosis and prognosis
- ✓ Management of communication disorders

- ✦ Team approach, Members of the Team: speech and hearing professionals, medical specialists, psychologists, special educators, regular school teachers, social workers, village leader and prospective employer/ institutions, Details of other referral points, Role of speech & hearing technicians in the team.
 - ✦ Bases of speech & language therapy and hearing intervention-common procedures in therapy
 - ✦ Planning speech therapy programme for articulation, voice, fluency, language Deviations and delays (including material and instruments needed), Implications and impact of hearing loss /mental retardation/ cerebral palsy
 - ✦ Analysing needs of the patients, planning short term and long term goals, activities & teaching aids for therapy, assessing progress, Recognizing small changes in progress
 - ✦ Imparting guidelines to the parents for practice of activities at home, Training parents as equal partners, Importance of speech and language stimulation
 - ✦ Reinforcers, methods of reinforcement
 - ✦ Tips on parent counseling and guidance
- ✓ Auditory training & speech reading
- ✦ Acceptance of hearing aid by self and family
 - ✦ Auditory training- need and its importance. General principles, steps in auditory training, Materials needed, Assessment of auditory performance, factors affecting auditory training-age of the child, type of hearing loss, intensity of stimuli and others. Methods of recording auditory response and progress, Games and activities for individual and group auditory training.
 - ✦ Speech reading, General principles, Methods of speech reading, Speech reading, cued speech, activities for speech reading in day to day communication, Specific planning for speech reading lessons, Factors (environment, speaker, language reader) affecting speech reading.
- ✓ Non/verbal communication
- ✦ Augmentative and alternative communication (AAC)- Definition
 - ✦ Types of AAC:
 - ✦ Aided- Definition and types of symbols with examples (objects, pictures, orthography, blissymbols), Low technology (communication boards, communication wallets, communication books & others) and high technology aids (few softwares), Dedicated and Nondedicated systems, Adaptation of aided systems to individual needs.
 - ✦ Unaided- Definition and types of symbols with examples (manual signs, pantomime, gestures, facial expressions), Introduction to sign languages: Finger spelling & basic vocabulary in American Sign Language, Indian Sign Language – basic vocabulary.
- ✓ Record keeping
- ✦ Different records (administrative and clinical) to be maintained, Documentation of diagnostic, clinical & referral reports.

➤ Education for Children with Special Needs

- ✓ Introduction to education
- ✓ Education of children with special needs
- ✓ Educational problems faced by children with
 - ✦ Hearing impairment
 - ✦ Mental retardation
 - ✦ Other communication disorders
- ✓ Approaches in teaching language to children with communication disorders
 - ✦ verbal approaches
 - natural and structured methods
 - unisensory and multisensory methods
 - ✦ non-verbal approaches
- ✓ Selection of appropriate communicational approaches for children with communication disorders
- ✓ Educational Programmes for Children with Communication Disorders.
 - ✦ Preparatory training
 - Parent-Infant Programme
 - Early Stimulation Programme
 - Mothers' Training Programme
 - Preschool Programme
 - ✦ Types of Educational Set-ups
 - Mainstreaming – inclusive and integrated education
 - Segregation: Special day classes, special day schools and special residential schools
 - ✦ Selection of appropriate educational set-ups for children with communication disorders
 - ✦ Measures to facilitate mainstreaming of children with communication disorders – like organising resource room facilities
 - ✦ Programmes and schemes for promoting mainstreaming of children with communication disorders – IEDC, DPEP, IEYCD
- ✓ Curricular Development / Adaptation & Instruction for Children with Communication Disorders
 - ✦ Identifying specific educational goals, and planning / implementing individualized educational programmes
 - ✦ Teaching curricular subjects (other than language) to children with communication disorders
 - ✦ Parental participation in the educational process through home training

✓ Preparation / Use of Teaching Aids and Language Workbooks

- ✦ Teaching aids – Need, uses and types
- ✦ Language workbooks – contents, uses and advantages
- ✦ Linking language workbooks with other teaching aids

✓ Role of speech and hearing technicians in Education / Training in Children with Communication Disorders

- ✦ Facilities for children with MR
- ✦ Facilities for children with HI
- ✦ Facilities for children with CP
- ✦ Role in identifying and guiding them for appropriate vocations

DIPLOMA IN ANAESTHESIA TECHNOLOGY

1ST YEAR SYLLABUS

PAPER - A

BASIC ANATOMY

Introduction to Anatomy

Basic Anatomical terminology

Osteology- Upper limb – clavicle, scapula, humerus, radius, ulna Lower limb - femur, hipbone, sacrum, tibia, fibula Vertebral column

Thorax – Intercostal space, pleura, bony thoracic cage, ribs sternum & thoracic vertebrae

Lungs – Trachea, bronchial tree

Heart – Surface anatomy of heart, chambers of the heart, valves of the heart, major blood vessels of heart, pericardium, coronary arteries.

Skeleto-muscular system – Muscles of thorax, muscles of upper limb (arm & fore arm) Flexor and extensor group of muscles (origin, insertion, action)

Excretory system – Kidneys, ureters, bladder

Answer - 2

"Answer - 2"

PRACTICALS**Mannequins to be provided for Teaching**

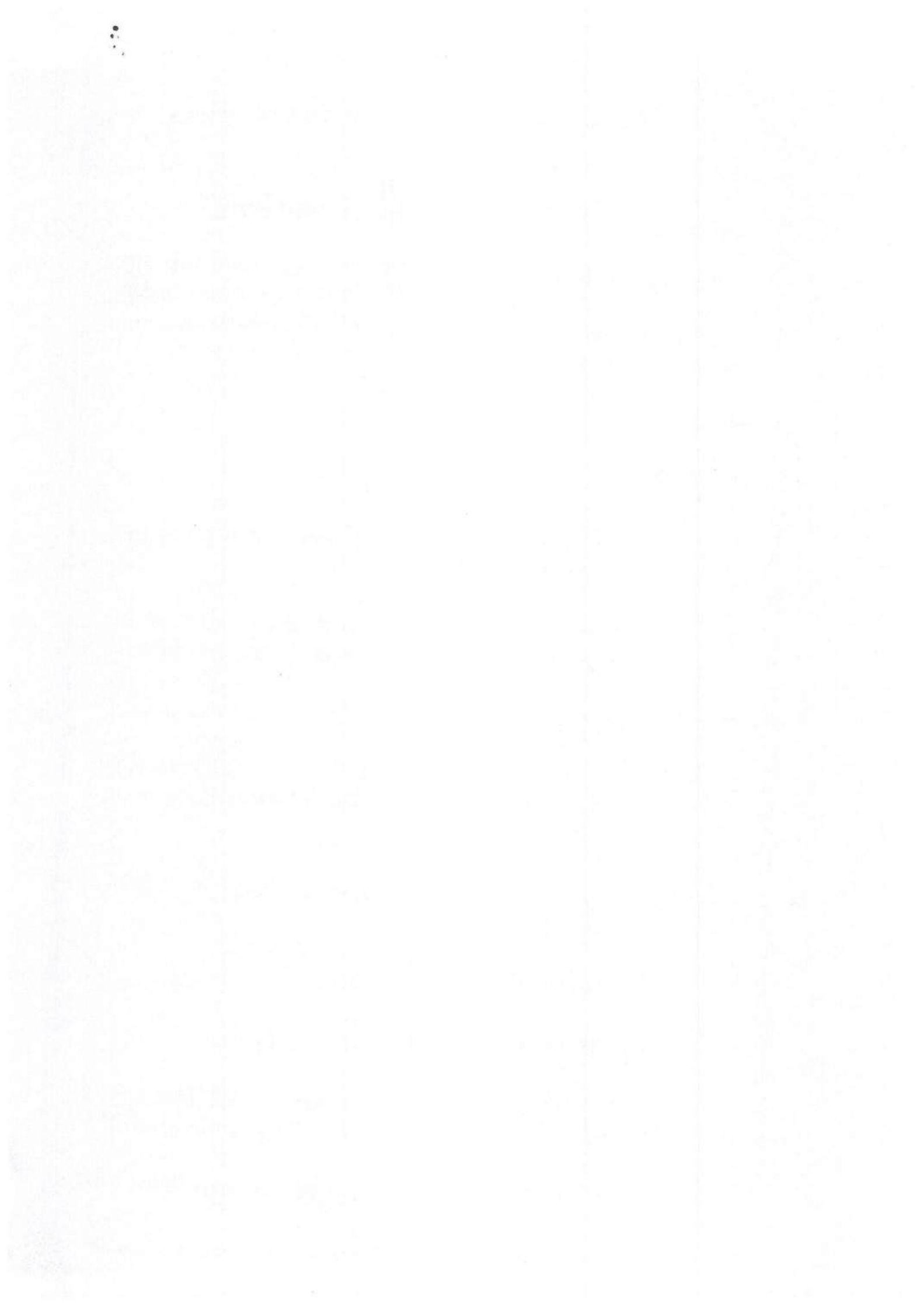
Osteology – Bones identification (right and left side) and prominent features and muscle attachment of the bone, clavicle, scapula, radius, ulna, humerus, femur, hip bone, sacrum, tibia, fibula.

PHYSIOLOGY**THEORY****1) The Cell:**

- (i) Cell Structure and functions of the various organelles.
- (ii) Acid base balance and disturbances of acid base balances (Alkalosis, Acidosis)

2) The Blood:

- (i) Composition of Blood, functions of the blood and plasma proteins, classification and protein.
- (ii) Pathological and Physiological variation of the RBC.
- (iii) Function of Hemoglobin
- (iv) Erythrocyte Sedimentation Rate.
- (v) Detailed description about WBC-Total count (TC), Differential count (DC) and functions.
- (vi) Platelets – formation and normal level and functions



(vii) Blood groups and Rh factor

3) **Cardio-Vascular System:**

- (i) Physiology of the heart
- (ii) Heart sounds
- (iii) Cardiac cycle, Cardiac output.
- (iv) Auscultatory areas.
- (v) Arterial pressures, blood pressure
- (vi) Hypertension
- (vii) Electro cardiogram (ECG)

4. **Respiratory system:**

- (i) Respiratory movements.
- (ii) Definitions and Normal values of Lung volumes and Lung capacities.

5. **Excretory system:**

- (i) Normal Urinary output
- (ii) Micturation
- (iii) Renal function tests, renal disorders.

6. **Reproductive system:**

- (i) Formation of semen and spermatogenesis.
- (ii) Brief account of menstrual cycle.

7. **Central Nervous system:**

- (i) Functions of CSF.

8. Endocrine system:

Functions of the pituitary, thyroid, parathyroid, adrenal and pancreatic Hormones.

9. Digestive system (for the students of Diploma in Scope Support Technology)

- (i) Physiological Anatomy of the GIT.
- (ii) Food Digestion in the mouth, stomach, intestine
- (iii) Absorption of foods
- (iv) Role of bile in the digestion.

PRACTICAL

- 1) Determination of Blood Groups.
- 2) Measurement of human blood pressure.
- 3) Examination of Respiratory system to count respiratory rate and measure inspiration and respiration

GENERAL PHARMACOLOGY

- 1. Introduction and scope of Pharmacology
- 2. Various routes of drug administration advantages and disadvantages.
- 3. Biotransformation of drugs types and definition of Bio-transformation reactions.
- 4. Excretion of drugs, definition and routes of drug elimination.
- 5. General Mechanism of drug action and factors modifying drug action.
- 6. Drug distribution, definition and factors, affecting drug distribution.

PAPER - B**A. BIO-CHEMISTRY***** Carbohydrates**

Glucose and Glycogen Metabolism

*** Proteins:**

Classification of proteins and functions

*** Lipids:**

Classification of lipids and functions

*** Vitamins & Minerals:**

Fat soluble vitamins(A,D,E,K) – Water soluble vitamins – B-complex vitamins- principal elements(Calcium, Phosphorus, Magnesium, Sodium, Potassium, Chlorine and sulphur)- Trace elements – Calorific value of foods – Basal metabolic rate(BMR) – respiratory quotient(RQ) Specific dynamic action(SDA) – Balanced diet – Marasmus – Kwashiorkor

BIOCHEMISTRY SYLLABUS FOR PRACTICALS

1. Benedict's test
2. Heat coagulation tests

B. PATHOLOGY

1. * Cellular adaptation, Cell injury & cell death.
* Introduction to pathology.

- * Overview: Cellular response to stress and noxious stimuli.
- * Cellular adaptations of growth and differentiation.
- * Overview of cell injury and cell death.
- * Causes of cell injury.
- * Mechanisms of cell injury.
- * Reversible and irreversible cell injury.
- * Examples of cell injury and necrosis

2. **Inflammation.**

General features of inflammation
Historical highlights
Acute inflammation
Chemical mediators of inflammation
Outcomes of acute inflammation
Morphologic patterns of acute inflammation
Summary of acute inflammation
Chronic inflammation

3. **Immunity disorders.**

General features of the immune system
Disorders of the immune system

4. **Infectious diseases.**

General principles of microbial pathogenesis
Viral infections
Bacterial infections-Rheumatic heart disease.
Fungal infections
Parasitic infections

5. **Neoplasia.**

Definitions
Nomenclature
Biology of tumor growth benign and malignant

neoplasms Epidemiology

Carcinogenic agents and their cellular interactions

Clinical features of tumors

C. BASICS OF COMPUTER

COURSE CONTENT:

Introduction to computer – I/O devices – memories – RAM and ROM – Different kinds of ROM – kilobytes. MB, GB their conversions – large computer – Medium, Micro, Mini computers – Different computer languages.

Typing text in MS word – Manipulating text – Formatting the text – using different font sizes, bold, italics – Bullets and numbering – Pictures, file insertion – Aligning the text and justify – choosing paper size – adjusting margins – Header and footer, inserting page No's in a document – Printing a file with options – Using spell check and grammar – Find and replace – Mail merge – inserting tables in a document.

Introduction to Internet – Using search engine – Google search – Exploring the next using Internet Explorer and Navigator – Uploading and Download of files and images – E-mail ID creation – Sending messages – Attaching files in E-mail – Introduction to "C" language – Different variables, declaration, usage – writing small programs using functions and sub – functions.

D. CSSD Procedures

1. Waste disposal collection of used items from user area, reception protective clothing and disinfections sage gaurds,
2. Use of disinfections sorting and classification of equipment for cleaning purposes, sharps, blunt lighted etc. contaminated high risk baby care - delicate instruments or hot care instruments,
3. Cleaning process - use of detergents. Mechanical cleaning apparatus, cleaning instruments, cleaning jars, receivers bowls etc. trays, basins and similar hand ware utensils. Cleaning of catheters and tubings, cleaning glass ware, cleaning syringes and needles.
4. Materials used for wrapping and packing assembling pack contents. Types of packs prepared. Inclusion of trays and galliparts in packs. Method of wrapping and making use of indications to show that a pack of container has been through a sterilization process date stamping.
5. General observations principles of sterlization. Moist heat sterlization. Dry heat sterlization. EO gas sterlization. H2O2 gas plasma vapo sterlization.

E. Regional Anaesthetic techniques.

- a. Local anaesthetic technique
- b. Nerve blocks
- c. Spinal Anaesthesia
- d. Epidural anaesthesia

Diploma
Anaesthesia Technology Course

2nd YEAR SYLLABUS

PAPER -A

Main Syllabus

1. Applied Anatomy and Physiology
2. Clinical Pharmacology
3. Clinical microbiology
4. Medical Ethics.
5. Medicine outline
6. Principles of Anaesthesia
7. Basic Anaesthetic techniques

1. APPLIED ANATOMY AND PHYSIOLOGY
RELATED TO ANAESTHESIA

I. RESPIRATORY SYSTEM

- A. Structure and function of the respiratory tract in relation to respiratory system

Nose	-	Role in humidification
Pharynx	-	Obstruction in airways
Larynx	-	Movement of vocal cords, Cord palsies.
		Trachea & Bronchial tree - vessels, nerve supply, respiratory tract, reflexes, bronchospasm
Alveoli	-	Layers, Surfactants

B. Respiratory Physiology

- Control of breathing
- Respiratory muscles - diaphragm, intercostals
- Lung volumes - dead space, vital capacity, FRC etc.
- Pleural cavity - intrapleural pressure, pneumothorax.
- Work of breathing - airway resistance, compliance
- Respiratory movements under anaesthesia.
- Tracheal tug - signs, hiccup

C. Pulmonary Gas Exchange And Acid Base Status

- Pulmonary circulation
- Pulmonary oedema,
- Pulmonary hypertension
- Pulmonary function tests.
- Transfer of gases - oxygen & Carbondioxide

- Acid base status, definitions, acidosis types, Alkalosis types, buffers in the body.

D. Oxygen: **properties, storage, supply, hypoxia**

E. Respiratory failure, type, clinical features, causes.

II. CARDIOVASCULAR SYSTEM

Anatomy - Chambers of the heart, major vasculature.

Coronary supply, innervation.

Conduction system.

Cardiac output - determinants, heart rate, preload, after load.

Coronary blood flow & myocardial oxygen supply

ECG

Arrhythmias cardiovascular response to

Anaesthetic & surgical procedures.

Hypotension - causes, effects, management.

↳ Cardio pulmonary resuscitation.

Myocardial infarction, hypertension.

III. FLUIDS AND ELECTROLYTES

- Body Fluids - Composition
- Water, sodium and potassium balance
- I.V. Fluids - composition & administration
- I.V. Cannulation.

IV. BLOOD TRANSFUSION

Blood grouping, storage, administration

2. Clinical Pharmacology

ANTISIALAGOGUES

Atropine, Glycopyrrrolate

SEDATIVES / ANXIOLYTICS

Diazepam, Midazolam, Phenergan, Lorazepam, Chlorpromazine, Trichlopho

NARCOTICS

Morphine, Pethidine, Fentanyl, Pentazoline

ANTIEMETICS

Metoclopramide, Ondansetron, Dexamethasone

ANTACIDS

Na citrate, Gelusil, Mucaine gel.

H2 BLOCKERS

Cimetidine, Ranitidine, Famotidine

INDUCTION AGENT

Thiopentone , Diazepam, Midazolam, Ketamine, Propofol, Etomidate.

MUSCLE RELAXANTS

Depolarising - Suxamethonium, Non depolarising - Pancuronium, Vecuronium, Atracurium, rocuranium

INHALATIONAL GASES

Gases - O₂, N₂O, Air

Agents - Ether-, Halothane, Isoflurane, Sevoflurane, Desflurane

REVERSAL AGENTS

Neostigmine, Glycopyrrolate, Atropine, Nalorphine, Naloxone, Flumazenil (Diazepam)

LOCAL ANAESTHETICS

Xylocaine, Preparation, Local - Bupivacaine - Topical, Prilocaine-jelly, Emla - Ointment, Etidocaine. Ropivacaine

EMERGENCY DRUGS

- Adrenaline : Mode of administration, dilution, dosage,
- Effects, Isoprenaline
- Atropine, bicarbonate, calcium, ephedrine, xylocard,
- Inotropes : dopamine, dobutamine, amiodarone

- Aminophylline, hydrocortisone, antihistamines, potassium.
- Cardiovascular drugs
- Antihypertensives
- Antiarrhythmics
- Beta - Blockers
- Ca - Channel blockers.
- Vasodilators - nitroglycerin & sodium nitroprusside
- Respiratory system- Bronchodilators, respiratory stimulants
 - o Bronchiolytic agents
- Renal system - Diuretics, furosemide, mannitol
- Obstetrics - oxytocin, methergin
- Miscellaneous - Antibiotics, paracetamol, diclofenac- IV fluids, various preparations NaCl, Ringer lactate, haemacel, hetastarch heparin, protamine, insulin, analgesics, nsaid, ibuprofen, ketorolac,

3. CLINICAL MICROBIOLOGY

- Sterilization & decontamination- I
 - o Dry Heat
 - o Moist Heat
- Sterilization - II
 - o Chemical methods
 - o Gaseous methods
 - o Filtration
- Wound Infection & Urinary Tract Infections

- Blood stream Infections
- Respiratory tract Infection
- S.Typhi, Salmonella Paratyphi 'A', Salmonella Typhimurium
- Catheter, IV associated Infections
- Hospital acquired infections & prevention of hospital acquired infections
- Hepatitis C

4. **MEDICAL ETHICS**

1. Medical ethics - Definition - Goal - Scope
2. Code of conduct - Introduction -
3. Basic principles of medical ethics - Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy

2nd YEAR PAPER - B**A. PRINCIPLES OF ANAESTHESIA****A. MEDICAL GAS SUPPLY**

- Compressed gas cylinders
- Colour coding
- Cylinder valves; pin index.
- Gas piping system
- Recommendations for piping system
- Alarms & safety devices.

B. ANAESTHESIA MACHINE

- Hanger and yoke system
- Cylinder pressure gauge
- Pressure regulator
- Flow meter assembly
- Vapourizers - types, hazards, maintenance, filling and draining, etc.

C. BREATHING SYSTEM

- General considerations: humidity & heat
- Common components - connectors, adaptors, reservoir bags.
- Capnography ; etc02
- Pulse oximetry
- Methods of humidification.
- Classification of breathing system
- Mapleson system - a b c d e f
- Jackson Rees system, Bain circuit

- Non rebreathing valves - ambu valves
- The circle system
- Components
- Soda lime, indicators

D. FACE MASKS & AIRWAY LARYNGOSCOPES

- Types, sizes
- Endotracheal tubes - Types, sizes.
- Cuff system
- Fixing, removing and inflating cuff, checking tube position complications.

E. ANAESTHESIA VENTILATOR AND WORKING PRINCIPLES.

F. MONITORING

- ECG
- SpO₂
- Temperature
- IBP
- CVP

G. BASIC ANAESTHETIC TECHNIQUES

HISTORY OF ANAESTHESIA

- First successful clinical demonstration:
- Pre - historic (ether) era
- Inhalational anaesthetic era
- Regional anaesthetic era
- Intravenous anaesthetic era

- Modern anaesthetic era
- Minimum standard of anaesthesia
- Who should give anaesthesia?

H. PRE-OP PREPARATION:

Pre anaesthetic assessment~ History - , past history - disease / Surgery / and personal history
- Smoking / alcohol

General physical assessment, systemic examination - CVS, RS, CNS

I. INVESTIGATIONS

Routine - Haematological - their significance
- Urine
- E.C.G.
- Chest X - ray

Special - Endocrine, hormonal assays
- Echocardiography
- Angiography
- Liver function test
- Renal function test
- Others

Case acceptance: ASA grading - I, II, III, IV, V

J. PRE - ANAESTHETIC ORDERS:

Patient - Informed consent
- NPO
- Premedication - advantages, drugs used
- Special instructions - if any

Machine - Checking the machine
O₂, N₂O, suction apparatus

- Laryngoscopes, et tubes, airways
- Things for IV accessibility
- Other monitoring systems

K. **INTRAOPERATIVE MANAGEMENT**

- Confirm the identification of the patient
- Monitoring - minimum
- Noninvasive & Invasive monitoring
- Induction - drugs used
- Endotracheal intubation
- Maintenance of anaesthesia
- Positioning of the patient
- Blood / fluid & electrolyte balance
- Reversal from anaesthesia - drugs used
- Transferring the patient
- Recovery room – set up and things needed

L. **POST OPERATIVE COMPLICATIONS & MANAGEMENT**

Postoperative problems

Nausea & Vomiting

Sore throat

Laryngeal granuloma

Neurological complications.

Awareness

Vascular complications.

Trauma to teeth

Headache

Backache

Ocular complications

Auditory complications

MAJOR CATASTROPHES

- o Mortality
- o Causes of death o Cerebral damage
- o Prevention.

M. Basic Intensive Care

1. MONITORING AND DIAGNOSTIC PROCEDURES IN I.C.U.

- Central Venous access.
- ECG monitoring.
- Invasive hemodynamic monitoring

2. GENERAL CARE OF PATIENT IN I.C.U.

- o Eye
- o Bladder Care
- o Care of mechanically ventilated patient
- o Tracheostomy, humidification
- o Vascular lines - arterial, venous line
- o Radiography
- o Physiotherapy - chest physiotherapy

N. MEDICAL ETHICS

1. Medical ethics - Definition - Goal - Scope
2. Code of conduct - Introduction -
3. Basic principles of medical ethics -

Confidentiality

21

4. Malpractice and negligence - Rational and irrational drug therapy

O. MEDICINE OUTLINES

1. Disorder of haemopoiesis - Anaemias - iron deficiency anaemia,
2. Infections diseases - Sepsis and septic stock, fever of unknown origin, infective endocarditis, infective of skin, muscle, soft tissue, infection control in hospital, diseases caused by bacteria, viruses, myobacterm, viruses, fungi and protozoa and helminthes, common secondary infection in HIV.
3. Diseases of CVS - congenital RHD - Rheumatic fever, CAD, Peripheral vascular diseases.
4. Respiratory system - asthma pneumonia
5. Kidney & Urinary tract - acute renal failure, Glomerulonephritis, Haemodialysis, Transplant, Urinary tract infection
6. Liver and biliary tract disease - Viral hepatitis, alcoholism
7. Endocrinology and metabolism - Diabetes mellitus, Hyper - and hypothyroidism

Brief Aspects to be Covered

TOPIC	Domain
1. <u>Medical Gas</u>	Must Know 1. compressed gas cylinders 2. Colour coding different gas cylinder and pipe line system 3. Cylinder storage space and things to remember while empty and full cylinder storing. 4. Diameter index safety system. 5. Medical gas pipe line system and station outlets. 6. Alarms and safety devices in pipe line gas supply. Desirable to Know 7. Oxygen concentrator working principle, their uses and care. Nice to know 8. Air compressor
2. <u>Gas administration devices</u>	Must Know 1. Anaesthesia masks : Types / sizes. 2. Flow meters 3. Gas Regulators Desirable to Know 1. Flow restrictors
3. <u>Oxygen Therapy</u>	Must Know 1. Definition, causes and responses to hypoxemia. 2. Clinical signs of hypoxemia. 3. Goals of oxygen therapy. 4. Evaluation of patients receiving oxygen therapy 5. Hazards of oxygen therapy.
4. <u>Anaesthesia Machine</u>	Must Know 1. Boyles Machine and its function.

2. Modern anesthesia machine.
3. Hanger and Yoke system
4. Cylinder pressure gauge
5. Pin index
6. Pressure regulator
7. Vaporizers- TYPES, Hazards, Maintenance, Filling and drainage.
8. Flow meter assembly

5. Breathing System **Must Know**

1. Open, Semi closed and Closed Circuits, Classification of breathing system
2. Mapleson breathing system
3. Jackson and Rees system
4. Bain circuit
5. Non rebreathing valves- Ambu valves

6. Injection Techniques **Must Know**

1. Intra muscular and insertion of Intra Venous cannulas.
2. Handling of sterilized syringes and needles.

7. Fluids and Electrolytes **Must Know**

1. Type of fluid (Crystalloids & Colloids)
2. Steps to prepare I.V. drip
3. Indication of specific fluid and their complication

8. Gas Analyzers and monitoring **Must know**

1. Pulse oxymeter
2. Oxygen Analyser / sensor
3. EtCO₂ Monitor / Capnography

Nice to Know

4. Transcutaneous oxygen monitor

9. Resuscitation**Must know**Techniques

1. Basic life support (Airway, Breathing, and Circulation)
2. Equipment utilized for it,
3. Drugs used in CPR,
4. Defibrillation

10. Artificial Airways**Must Know**

1. Types of airways (Nasal/Oral) and features,
2. Sizes, colour coding, and methods of insertion
3. Indications for use

11. Pre op and Post op care**Must Know**

1. Checking and preparation of Anaesthesia trolley and Eqpt
2. Pre operative preparation of patient.
3. Management of pre operative and post operative rooms.
4. Transportation Techniques of patient in conscious, semi conscious and unconscious patient to and fro - operation theatre.

12. Anesthesia Equipment**Must Know**Maintenance /sterilization

1. Cleaning, Disinfection & sterilisation
2. Physical / chemical methods
3. Testing of sterilization
4. Critical /semicritical /Non critical devices
5. Levels of Disinfection

Desirable to Know

1. Reusable items

1st YEAR PAPER - A

1. HUMAN BIOLOGY & DISEASE

- a. Infectious Diseases: General account, causes and control, immunity and chemotherapy.
- b. Diseases
(Definition of Disease, different types of pathogens such as bacteria, viruses and virus like organisms, fungi, helminths, protozoa), sources of Infections, Infections and contagious diseases, methods of prevention and biological control.
- c. Introduction: Microscopic structure of tissues and organs of a human tissue-Connective tissues, epithelium, cartilage, bone, blood, muscular tissue and nervous tissue.
- d. Basic knowledge of Systems.
- e. Organs: Stomach, small intestine, liver pancreas lungs, spleen, kidney, skin, testis and ovary.
- f. Functional anatomy and physiology of the digestive system, Respiratory System, Circulatory System (with reference of immunity) Nervous System with special reference to transmission of the nerve impulse, sense organ, functions of muscles,

Reproductive System, Endocrine System.

- g. Basic Pathology as applicable to above Systems.

2. CELL BIOLOGY & GENETICS INTRODUCTION:

Cell theory, cell as a unit of life. Tools and techniques of cell studies, Microscopy (Use of Microscope and Calibration), Elements of microscopic techniques, histo and cytochemistry, Electron microscope.

Elementary Knowledge of principles of X-ray — definition. Instruments and diffraction pattern.

Molecular building blocks in cellular system simple to complex macromolecules, structure and properties, Biomembrance-Transport mechanism, cellular respiration, cell organelles, structure and their functions. Enzymes, Vitamins and Hormones, their functions, chemical and physical structure, mode of action. Role of regulation of cellular activities.

Nucleus, Chromosomes, DNA structure including events in replication and transcription, genetic code, translation and protein synthesis and details of meiosis, gene interaction, linkage and crossing over, mutation, elaboration of Mendel's laws of inheritance, elementary concepts of quantitative inheritance, human genetics, sex linked

inheritance, genetics and society.

PRACTICALS: As per theory.

3. ANATOMY OF THE EYE

- a. Muscles of Eye.
- b. Conjunctiva, cornea, sclera, iris.
- c. Ciliary body, choroid and retina.
- d. Lens, vitreous and optic nerve.
- e. Circulation of the Eye.
- f. Orbit its relations and vascular communication.
- g. Lacrimal & lid glands.
- h. Visual Pathway.
- i. Cranial Nerves IV, V, VI & VII.
- k. Pituitary Gland and Cavernous Sinus.
- l. Parasympathetic, sympathetic nerves in relation to eye.

4. PHYSIOLOGY OF THE EYE

- a. Eye lid, lacrimal gland and lid gland.
- b. Functions of the eye ball and its parts.
- c. Pupillary reflexes.
- d. Convergence and accommodation (Pathway)
- e. Convergence and accommodation (Theory & Mechanism).
- f. Visual Pathways and fields.
- g. Light sense, colour sense and night vision.
- h. Form sense, visual acuity and testing.
- i. Unilocular and binocular vision.
- j. eye movement (conjugate and Disconjugate) and laws governing them.
- k. Visual cortex.
- l. vision.

PHYSICS, CHEMISTRY

RELATED TO EYE

5. OPTICAL PHYSICS

- a. Measurements: Concept of length and time, Conversation of some practical units. Equations of mechanicals quantity, area, volume, velocity, acceleration, momenutum, force moment, energy and work (Their dfinition).
- b. Wave Motion: Simple Harmonic motion, waves and wave propagation, wave motion (Including phase). Reflection, Dispersion, Polarization. Interference and differaction etc.
- c. Condensed State: nature of liquids, surface tension, capillarity.
- d. Electricity: Moving chargs, electric current, thermal effect. Jourle's law, Galvano meter, cyclotron (Basics) etc.
- e. Electromangetic Induction: Lenz's law, Eddy currents, Faraday's laws of electro magnotic induction, elementary ideas of electro magnetic waves, rotating coil in a magnetic fields, alternating current, transformers, long distance transmission meters, phase relationship between voltage and current etc.

- f. Electronic Devices: Thermionic emission, ideas of work function, cathode ray tube, diode and triodes, construction and characteristics, rectification and amplification, Transistors etc.

6. CHEMISTRY

- a. Periodicity: Periodic law and periodic table.
- b. Chemical handling and Molecular Shape: Concept of orbit overlap in bond formation, hybridization and lone electron pair repulsion concept or resonance bond energy and bond length, properties of covalent compounds in relation to electronegativity. Shape of the simple molecules, coordinate bond formation with a few examples. Ionic bonds & definition, factors influencing the formation of ionic bond, general properties of ionic compounds, metallic bond, an explanation for properties of metals. Hydrogen bonding etc.
- c. State of Matter: Discuss in terms of order and kinetic energy, properties of gas, liquids & elementary introduction to solid state.
- d. Energetics, Energy Changes, Chemical reactions: Exothermic and Endothermic reactions, solutions, fusions, vaporization and sublimation, Hess's Law, calorimetric values of food and fuels.
- e. Chemical Equilibrium: Law of mass action and its

application to chemical equilibrium, Le Chaterlier Braun principle, factors, Ionic equilibrium, aqueous solution products, common Ion effect. Modern concept of acid and acid base equilibrium, hydrolysis of salt, buffer solutions etc.

f. **Electro-Chemistry (Basic):** Electrolysis, Faraday's laws and calculation based on them. Application of electrolysis to electroplating and electro chemical preparation, Electrolytic conduction.

g. **General Treatment of a block elements:** General trends of properties of the elements boron family, important minerals of boron, borax and orthoboric acid test, boron nitrates and boron, hydrides (only an elementary idea to show as an electron deficient molecule).

Aluminum- Its minerals, extraction, properties and uses. some important compounds like alumina, aluminium and alums and alloys. (Especially boron, borox, aluminum group, including alums, carbon and nitrogen family).

h. **The Carbon Family:** General trends in properties, important minerals of tin and lead, various compounds, alloys of tin and lead.

i. **The Nitogen Family:** General trends in properties

of the family, important mine of phosphorous, ammonia, its manufacture, oxide and oxy-acids of nitrogen and phosphorous. Uses of metaphosphate, super phosphates and chemical fertilizers.

- J. Organic chemistry as chemistry of carbon compounds, hydrocarbons, simplest organic compounds, types of hydrocarbons, homologous series.
- i. Physical properties to be based on nature of bonding. Size and nature of the carbon chain and the general non-polar character.
 - ii. Chemical Properties: Combustion and controlled oxidation: Free halogenation and cracking in alkanes, catalytic hydrogenation and electrophilic addition in alkenes and alkynes. Markownikoff's rule.
 - iii. Some simple transformations in benzene and aliphatic compounds.
 - iv. Sources of hydrocarbons: Petroleum and coal for treatment from industrial point of view.

Ist YEAR PAPER - B

1. PHARMACOLOGY

- a. Basic Pharmacology, Pharmacy etc.
- b. Antiseptics
- c. Local anaesthetics, analgesics.
- d. Anti-glaucoma drugs
- e. Sedative and tranquilizers
- f. Mydratics and Miotics
- g. Antipyretics
- h. Steroids
- i. Chemotherapy agents including antibiotics

2. PATHOLOGY RELATED TO EYE

- a. Common Eye diseases
- b. Diseases of Eye lids.
- c. Diseases of Orbit.
- d. Diseases of Adnexa.
- e. Diseases of Cornea.
- f. Diseases of Conjunctiva
- g. Diseases of Lens.
- h. Injuries to the Eye.

3. OPHTHALMIC OPTICS

- a. Huygens construction (geometrical). Young's double slit experiments. Lloyd's Mirror, colour of the films (qualitative), single slit, diffraction,

applications of lesser beams, spectrometer, production of different types of spectral line, continuous and absorption.

- a. Nomenclature of prisms and their uses.
- b. Ophthalmic glass and physical form of ophthalmic lenses.
- c. Transmission density and opacity of a refracting glass and glass coating.
- d. Cylindrical lenses, Sturm's conoid.
- e. Lens combination.
- f. Aberration of lenses.
- g. Principle of fabricating various types of special lenses.
- h. Ophthalmic plastic lens.
- i. Refractive media of eye and principles of visual imagery.
- j. Corneal system and lenticular system.
- k. Reduced eye and image formation.
- l. Aberration of Eye.
- m. Principles, mathematical deviation and utility of Purkinje images.
- n. Pachometer.
- o. Keratometer
- p. Accommodation and convergence.
- q. Optical defects in genesis of refractive errors (Presbyopia, Aphakia and principles of their treatment with lens).

- r. Instruments concerning ophthalmic glass testing.
- s. Physiological basis of visual acuity and retinal images sizes.
- t. Human eye and spectacles.
- u. Effects of lens of the retinal image.
- v. Field of view and magnification.
- w. Refractive errors.
- x. Retinoscopy & its principles.
- y. Surface reflection.

4. MECHANICAL OPTICS

- a. Power of lens
- b. Transposition of lenses, shapes and sizes
- c. Grinding machines.
- d. Grinding materials.
- e. Tools and gauge and their testing.
- f. Spherical lenses.
- g. Cylindrical lenses.
- h. Bifocals and Multifocals.
- i. Ophthalmic prisms.
- J. Prism effect.
- k. Oblique cyclinders
- l. Protective lenses.
- m. Plastic lenses.
- n. Special lenses - Miscellaneous lenses & appliances.
- o. Speciality lenses.

2nd YEAR

PAPER - A

MAINTENANCE OF EQUIPMENTS & INSTRUMENTS, ROUTINE & SPECIAL EYE INVESTIGATION & RELATED SURGICAL PROCEDURES

1. Maintenance of equipments & instruments

- a. Understanding of ophthalmic equipments.
- b. Optical equipments: Ophthalmoscope, slit lamps keratometers Torches etc.
- c. Maintenance of Surgical Instruments.
- d. Diathermy machine.
- e. Microscope (laboratory) & eye bank equipments.
- f. Perimeter.
- g. Trial sets.
- h. Orthoptic equipments.

2. ROUTINE OPHTHALMIC INVESTIGATION

- a. Conjunctival Swab & smear taking for cytology & culture.
- b. Syringing and lacrimal function test.
- c. Tension taking.
- d. Colour vision.
- e. Visual fields.
- f. Various Instruments, their principles.
- g. Dark adaptometry.
- h. Keratometry.
- i. Pachometry.
- J. Anaesthesiometry.
- k. PH. testing.

- l. Othocalor.
- m. Refractionometer.
- n. Measurement of spectacle lense, power of focimeter.
- o. Fluorescein staining and techniques

3. SPECIAL OPHTHALMIC INVESTIGATIONS

- a. E.R.G.
- b. E.C.G.
- c. Electro oculomyography
- d. Ultrasonography
- e. Tomography.
- f. Burnan's Locator.
- g. Fluoresce in Angiography.
- h. Oculo-Nystagmography
- i. Ocular Photography anterior segment.
- j. Gonioscopy and 3 mirror C.L. Examination

4. ORTHOPTICS, PLEOPTICS and MUSCULAR IMBLANCE

- a. Normal Binocular function
- b. Grades of binocular vision.
- c. Fusion and stabismus stereopis (SMP)
- d. Etiology of stabismus.
 - i. Surgery
 - ii. Motor
 - iii. Central
- e. Methods of examination of stabismus.
 - i. History
 - ii. Visual acuity
 - iii. Covert test
- f. Ocular Movement and their testing.

- g Measurement of angle of squint
- h Testing of Binocular functions
- i Reterophoira
- i. Classificaion
- ii. Clinical Picture
- iii. Investigations
- j Esophoria
- i. Classification, Investigations.
- ii. Treatment
- k. Pheria (Cent.)
- i. Hyperphoria
- ii. Cyclophoria & Hyphoria
- l Abnormalities of Monocular Vision.
- i. Diploia
- ii. Confusion Supression
- m. Abnormal retinal Correspondance
- i. Definition
- ii. Aetiology
- iii. Classification

**5. Methods of detection of A.R.C. with their
relatives importance of A.R.C. (Conti.)**

- a. Prognosis
- b. Classification
- c. Investigations
- d. A.C./A. Ration
- e. Its importance
- f. Methods of testing

6. Concomitant Squint (Accomodative)

- i. Aetiopathogenesis
- ii. Classification
- iii. Special Investigations
- iv. Treatment of Accommodative Squint
- v. Optical
- vi. Orthoptics
- vii. Miotics
- viii. Surgery
- ix. Subject
- x. Non-Accommodative Squint
- xi. Classification
- xii. Investigations
- xiii. Treatment

7. Divergent Squint

- i. Classification
- ii. Investigations

8. Vertical Squint

- i. Aetiology
- ii. Classification
- iii. Investigations
- iv. Primary Vertical
- v. Secondary Vertical
- vi. Differential Diagnosis of Primary and Secondary Vertical
- vii. Alternating Circumduction
 - i. Aetiology
 - ii. Classification
 - iii. Clinical Picture

iv. Investigation & Management

9. Torsional Squints

- i. Cyclotopia
- ii. Aetiology
- iii. Classification
- iv. Clinical Picture & Management

10. Suppression

- i. Defection & Treatment
- ii. Amolyopia
- iii. Definition
- iv. Aetiology
- v. Development
- vi. Classification
- vii. Detection
- viii. Management with occusional therapy after images
- ix. Definition
- x. Description
- xi. Usage of after images in the treatment of Amoblyopia and pieoptic therapy.
- xii. Haldinger brushes
- xiii. Bangeter method of pleoptic therapy
- xiv. Indication of Orthoptic and surgical treatment.
- xv. Latent stabismus
- xvi. Manifest Stabisumus
- xvii. Post-operative Orthoptic Management

2nd YEAR

PAPER - B

16

1. INTRODUCTION TO TECHNIQUES AND PREPARATION OF THE PATIENT

- a. Asepsis-How to achieve?
- b. Anaesthetic agents and where indicated.
- c. Pre-operative Instructions.
- d. Post-operative Instructions.
- e. Cauterisation of Ulcers.
- f. Spilation and Electrolysis.
- g. Bandaging of Eye
- h. Syringing
- i. Scraping
- j. Taking samples of conjunctival and culture examinations.

2. NUTRITION, INDUSTRIAL Including BIOLOGY, STATISTICS & COMMUNITY WELFARE

INDUSTRIAL HAZARDS & THEIR PROTECTION, BIOLOGY, STATISTICS & NUTRITION

- a. Concept, Importance, classification of food, dietary requirements (in context with eye), balanced Diet, Community Nutrition, Nutritional education: definition, scope, principles etc.
- b. Nutrition and Eye Diseases.
- c. Introduction, Concurrence, methods of cultivation of important crop plants and

related diseases.

3. STATISTICS

- i. Statistics & Probability
- ii. Population and sample
- iii. Measures of central tendency and dispersion.
- iv. Point and interval estimation.
- v. Scatter diagrams (Pearson Correlation co-efficient)
- vi. Random experiments and samples space, Events.
- vii. Probability on a sample
- viii. Conditional probability, multiplication theorem.
- ix. Independent events.
- x. Random variables (discrete), Binomial and poisson probability distribute.
- xi. Expected value (Mean) and Variance. Calculations for simple probability distribution.
- xii. Normal distribution
- xiii. Fundamental principles and basic knowledge.

4. VISION AIDS, CONTACT LENS & PROTECTIVE GLASSES

- a. Contact lens basic concepts.
- b. Lens designing.
- c. Manufacturing principles and low vision aid.
- d. Causes of visual impairment and blindness.
- e. Classification of low vision aids and special optical features of groups and child mode action.

- f. Introduction to visual prosthesis.
- g. Visual requirement in industries.
- h. Illuminations
- i. Prevention of industrial injury and special services of aid.
- J. First Aid to eye injury.
- k. Entrepreneurship: Introduction to entrepreneurship meaning, importance and persons qualities needed, scope, employment opportunities, Introduction to small business, production
- l. Marketing, managerial and financial election of business and preparation of Project Report.
- m. Financing Agencies, financial facilities how and where to get precedural details in starting a new industry, investment, decision, market study, production, planning and scheduling budgeting, man power planning.

5. **COMMUNITY WELFARE**

- i. Eye Screening Programmes, (with spcial emphasis on National Blindness Control Programme), School Clinics and Surveys.
- ii. Functioning of Mobile Eye Health Units including eye camps and practical participation in the same.
- iii. Determination of refractive errors and prescription of glasses.
- iv. Blind and its problems and rehabilitation measures.

- v. Health Education in the field of eye care.
- vi. Medical Secretarial Assistance.
- vii. Appointments.
- viii. Drafting and correspondence
- ix. Records Maintenance
- x. Coping

6. Refraction

- a. Refractive surfaces (elements in the eye).
- b. Objective methods of Refraction.
- c. Accommodation and convergence.
- d. Far-point and near-point
- e. Presbyopia
- f. Retinoscopy - Automated Refraction.
- h. Correction - Emmetropia and Ametropia
- i. Amplitude - Accommodation and its measurements.
- j. Hypermetropia, Myopia, Astigmatism and its correction
- k. Keratometry and Tonometry
- l. Ophthalmoscopy
- m. Trial Box - Its accessories.
- n. Visual Acuity - Its recording and effects of illumination.
- o. Intra -ocular Lens implant.

7. Visual Optics and Eye Diseases.

- a. Colour Blindness - Its testing.

- b. Muscles of Eye - Extra-ocular and Intra-ocular
- c. Phorias and Tropias
- d. Amblyopia.
- e. Cataract.
- f. Glaucoma
- g. Trachoma
- h. Corneal ulcer
- i. Conjunctivities.

8. General Pharmacology

- a. Mode of Administration of a drug.
- b. Action of Drug.
- c. Analgesics
- e. Tolerance and Intolerance of drug.
- f. Anesthesia - various types, site of action, Duration of action and side-effects.
- g. Topical Medication in Ophthalmology.
- h. Drugs in relation to aqueous Humour.
- i. Vitamins and Hormones.
- j. Drug Toxicity in relation to ocular function.

1st YEAR

A. HUMAN ANATOMY AND PHYSIOLOGY

1. **Terms used in Anatomy.** Surface anatomy markings and location of important body parts, organs, bones, arteries and veins. Important body Planes of thoracic, abdominal and pelvic cavities.
2. **Musculo-Skeletal System.** Functions and anatomy, skeletal system, skeletal system, skeletal muscles, smooth muscles. (bones, joints, types of joints, muscles, types of muscles, vertebral column, upper and lower limbs, Skull, Rib cage, pelvis).
3. **Cardio-Vascular System** including heart, major blood vessels, arteries, veins, capillaries, lymphatic system. Blood cells, Blood groups, blood cells, plasma, blood groups.

Physiology of Cardio-vascular system of heart, blood pressure. Cardiac cycle, Coronary

circulation. Conduction system of heart-Systemic circulation, pulmonary circulation, Portal circulation.

4. **Respiratory System** Nose, Pharynx, Larynx, Lungs, trachea, bronchus, broncho-pulmonary segments, alveoli, arterial supply, venous drainage.

Physiology of Respiration, different Lung Volumes, Gas exchange.

5. **Central Nervous system** including the brain, spinal cord, central and peripheral nervous system, cranial nerves.

Function of the nervous system including autonomic nervous system, CSF, cranial nerves, sensory and motor systems. Neuron.

6. **Head and Neck including external ear**, middle ear, inner ear, temporal bone, paranasal sinuses, pharynx, larynx, oral cavity, tongue, nasal cavity, Orbit.

7. **Gastro-Intestinal tract** including the Esophagus, Stomach, Small Intestine - Duodenum, Jejunum, Ileum, Cecum, appendix, Large intestine - Ascending, Transverse, Descending colon, Hepatic and Splenic flexures, Sigmoid Colon, Rectum and anal canal. Salivary glands. Hepato-Biliary system including the Liver, Gall Bladder, Biliary tree, Pancreas, Spleen.

Physiology of the hepato-biliary system including formation and circulation of bile, portal circulation, physiology of digestion, various reflexes in digestive stem.

8. **Urinary system** - including Kidneys, Ureters, Urinary Bladder, Urethra,

Structure of Nephron and physiology of excretion.

Process of Micturition

9. **Male and Female reproductive system**

including penis, testes, prostate, seminal vesicles, uterus, cervix, fallopian tubes, ovaries, vagina, vulva, Breast, Menstrual cycle, Ovulation, Spermatogenesis, Sex Hormones, Fertilization. Cell division.

10. **Endocrine system** including the Endocrine glands and hormones. Pituitary, Thyroid, parathyroid, Adrenal, Gonads, pancreas

Exocrine glands

Endocrine glands.

B. PHYSICS AND GENERAL RADIO-GRAPHY

1. **X-Ray production and properties:** Introduction to X-rays, history, origin, construction of X-ray tubes, requirements for X-ray production (electron source, target and anode material), tube voltage, current, space charge, stationary and rotating tubes, importance of kVp, mAs in radiology. Common factors affecting thermionic emission, focal spot, tube rating, heat units, operating

conditions, maintenance and Quality assurance procedures. Tube Rating charts, Anode Heat Effect.

Image and its characteristics: Formation of radiological image, latent image, intensifying screens, factors affecting image quality,

2. **Factors affecting image quality:** radiographic image contrast, density, sharpness, magnification, distortion of image, noise, blur. Scattered radiation, appliances to reduce scattered radiation, grids - stationary and moving, use of cones, diaphragm, light beam devices, collimation, Air Gap Technique.

X-Ray generators and circuits: Filament current and voltage, primary circuits, auto transformers, types of exposure switch and timers, principle of automatic exposure control (AEC), filament circuit, high voltage circuits, half and full wave rectification, three phase circuits. Types of generators, 3 phase, 6 and 12 pulse circuits, falling load generators, capacitors discharge and grid control systems.

3. **Radiation Hazard and Protection:** Units of radiation, SI units, ICRU definition of absorbed dose, quality factor, dose equivalent, relationship between absorbed and equivalent dose, patient dose, occupational exposure, natural and background radiation. Basic principles of ionization chamber, proportional counter, GM counters, scintillation detector, thermoluminescent dosimeters (TLD), Radiation Dosimetry, Film Badge, Inverse square Law.

Biological effects of ionizing radiation: excitation and free radical formation, DNA, RNA and tissue radio-sensitivity. Effects of ionizing radiation, stochastic and non-stochastic effects, mean and lethal dose.

Principles of radiation protection: ALARA principle time, distance, shielding AERB Guidelines, Bhabha Atomic Research Centre (BARC) Room layout, construction and installation Quality assurance, radiation leakage, devices to measure radiation, exposure during pregnancy, 10 day rule.

Uses of Protective devices, Lead Apron, Work practices, Radiation dose of common X-rays CXR, Spine, Abdomen, Barium, Mammography, CT Scan, Recommended dose limits for patient and Radiographer.

4. **Introduction of dark room**, layout ventilation, illumination, developer, fixer tanks. Dry bench, wet bench, pass boxes. Characteristics, features and requirements of safe light. Process of developing, fixing, rinsing.

Film material, construction of films, types of film, single emulsion, double emulsion, storage of films, sizes. Film speed, high speed, low speed. Newer film types - laser film, dry and wet laser films. Film artifacts.

Screens: Construction of screen, uses of screen, types of screens. High speed, low speed, care of screens, film-screen combination - advantages, technique modification in relation to speed. Principles of fluorescence and phosphorescence, rare earth screens, blue and green screens.

Film processing - manual, automatic film processing, washing, drying hangers - clip hangers, channel hangers. Chemicals - Developers, fixers, rinser, replenisher solution etc. Advantages, disadvantages of automatic, manual processing. Film fog - definition, types of fog, causes of fog. Effect of temperature, sunlight in improper storage old films, Cassetters - Design, care, construction, types and mounting.

Emergency drugs used in Radiology department, Informed consent, PCPNDT Act.

Radioactivity - Basic Principles, isotopes, Alpha. Beta, Gamma Rays commonly used radio-Active Isotopes in Imaging.

2nd YEAR

C. Radio-Graphic and Dark-Room Techniques

- A. Contrast Media,** Oral and IV, Barium sulphate (Low density, high density) Iodinated contrast agents (Ionic and Non-Ionic), Side effects of Ionic contrast media, Advantages of non Ionic Contrast media, Adverse reactions to contrast media, prophylaxis and treatment of adverse reactions, Contrast dosage & nephropathy, MRI Contrast agents and their side effects, Informed consent emergency drugs used in Radiology department, composition and properties of USG & ECG Jelly.
- B. Imaging of Genito-Urinary system** IVU. Patient consent, LMP, Patient preparation, indications, contraindications, Technique Tailored IVU, Double dose IVU, RGU, MCU, pericatheter study Nephrostogram, RGP.
- C. Skull Radiography** - including AP/Lateral views, base of skull view, radiological base line, radiography of the pituitary gland, mastoids, various specialized views of skull radiography.

Radiography of Para nasal sinuses (PNS), - Water's view, townes's view X-ray of nasal bone, styloid process & TM joints. Radiography of soft tissue of neck - special considerations.

- D. **Radiography of upper extremity**, bones and joints - views techniques. Radiography of lower extremity - views, techniques. Special views for small joints - wrists, MCP, IP joints, tarsal bones etc.
- E. **Chest Radiography** - various views, techniques, decubitus views. Radiography of ribs, soft tissues. Abdominal radiography - erect, supine, KUB - views, techniques. Radiography of pelvis -views and techniques.
- F. **Radiography of hips**, pelvis - views and techniques, precautions. Radiography of spine, vertebral column - views, techniques. Special care in vertebral injury cases. Radiography in trauma patients, CV junction radiography techniques.
- G. **Dental Radlography**, Orthopantomograms,

Pediatric Radiography, Mobile Radiography,

H. **HSG** (Patient Preparation, technique post procedure care), Ten Day Rule.

I. **Imaging of Digestive system** and biliary tract....
Barium Swallow, Meal, Follow Through, Enema (weight / volume concentration), Hypotonic duodenography Single Double contrast, Technique indications positioning and various views, Enteroclysis, OCG, T-Tube cholangiography. Gastrography, Conray swallow, IV Cholangiography, ERCP. Indications o iodinated contrast agents for GIT.

J. **Film - Screen Mammography** Special features of mammography equipments including tubes, grids, screens and films Equipment - tube, compression techniques, Automatic exposure control. Imaging Techniques and views - conventional and supplementary, grids, techniques in dense breast, compression techniques Tomosynthesis, CAD, screening and Diagnostic mammography, Dacrocystography, Sialography,

Myelography, Arthrography.

- K. **Basic Uses of Digital Technology** in Radiography, PACS, HIS, RIS, DICOM, Filmless Radiology. Artifacts in digital Radiography.
- L. **Computerized Radiography systems**, Digital Radiography systems, DR and CR systems - uses and advantages. Components of DR and CR System, Digital Fluoroscopy, Image intensifier.
- M. **Multi-Format cameras**, Thermal paper printers, Laser printers - Dry and wet laser printers.
- N. **C.T. Scan**, Basic physics, tube technology, detector technology, generators, gantry, console etc. Data acquisition, various methods of scanning, types and generation of CT Scanners, slip ring technology. Post processing, software's. Hounsfield units, values of normal tissues. Use of oral, rectal, IV contrast in CT scan, dose consideration, CTDI, administration, patient preparation. Principles of window, grey scale contrast optimization.

- O. **Clinical application** of CT scan. CT scan techniques of brain, chest, abdomen, head and neck, etc. Post processing and multi planar reconstruction.
- P. **Multislice C.T.**, Advantages and limitations of CT Scans, artifacts in CT scan and techniques of minimize artifacts dual energy CT.
- Q. **Basic physics of MRI**, data acquisition, relaxation time, gradient echo, spin echo techniques. Larmour frequency -equation and constant. Effect of magnetic field on cells. Magnets - types of magnets, permanent magnets, superconductor magnets, field strength - tesla. Close and open magnets Sequences in MRI, basic sequences, T1, T2 weighted images, IV contrast agents in MRI MRCP.
- R. **Application of MRI** in brain imaging, spine imaging, abdomen and pelvis imaging, imaging of joints, head and neck.
- S. **MRI room design** and installation. Safety factors,

precautions in MRI, MRI artifacts and methods to reduce them.

T. Angiographic techniques in radiology:

Historical perspective, principle of conventional angiography, Seldinger Technique angiographic equipment (single and biplane), image intensifiers, rapid sequence film techniques. Digital Subtraction Angiography, contrast dose, electromechanical injectors. Commonly used catheters, Guide wires and needles.

U. Patient care during interventional radiography,

preparation for the procedure, post procedure care, role of radiographer in interventional procedures, radiation protection during angiography.

V. Basic physics of Ultrasound Imaging,

interaction of Ultrasonic waves with matter. Transducer technology, display controls, recording and archiving of USG images. Advantages and uses of Ultrasound, Coupling agents USG Jelly - ingredients, preparation, application.

precautions in MRI, MRI artifacts and methods to reduce them.

T. Angiographic techniques in radiology:

Historical perspective, principle of conventional angiography, Seldinger Technique angiographic equipment (single and biplane), image intensifiers, rapid sequence film techniques. Digital Subtraction Angiography, contrast dose, electromechanical injectors. Commonly used catheters, Guide wires and needles.

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- W. **Basic Principles of Color Doppler**, uses of color Doppler, Pulsed Doppler Continuous wave Doppler, power angiography. B-mode, M-Mode, Color Doppler, Continuous wave Doppler.
- X. Artifacts and bio effects of ultrasound and safety considerations.
- Y. **Patient and radiographers** causes of conflict, Responsibilities, Negligence Ethical Responsibility, Legal Responsibilities.
- Z. **Procedure in The Event** of an accident, Patient safety.
- Aa. **Hygiene**, communication skills in Radiology department, Patient preparation.
- Ab. **Biomedical Waste segregation** (Yellow, White, Blue, Red) and disposal of Radioactive waste.
- Ac. **Radiation safety**, Radiography of children's Gonad dose, Protective measures.

Ad. PCPNDT ACT,

Ae. Informed consent.

Af. Bone Densitometry

Ag. Basics of Electrocardiography

Ah. Pediatric and emergency Radiography.

Ai. Radionuclide imaging Devices (Basic
Introduction) Gamma Camera, SPECT PET.
Radiopharmaceuticals.

Aj. Radiotherapy, Brachytherapy, Teletherapy,
Gamma radiation.

PHYSIOTHERAPY

YEAR - I

1. Anatomy
2. Human Physiology
3. Exercise Therapy & Massage
4. Electro-therapy & Actino Therapy
5. Psychology

YEAR - II

1. Medicine
2. Surgery
3. Physical Therapy in medical condition.
4. Physical Therapy in Surgical condition.
5. Biomechanics & Kinesiology
6. Disability Prevention & Rehabilitation
7. National Health Programme
8. Bio-Medical Waste

1st YEAR
PAPER - A

2

A. Anatomy

1. Histology-cell tissue of the body, epithelium, connective tissue, cartilage, bone, blood, lymph, muscles, nervous system.
2. Osteology - formation, classifications, functions, growth and repair of bones.
3. Embryology- Ovum, Spermatozoa, Fertilisation, organogenesis, Development of various systems.
4. Blood Vascular System -arteries, capillaries, veins, lymphatic systems.
5. Respiratory System-anatomy of larynx, trachea and bronchi, the pleura, the lungs.
6. Digestive system.
7. Urogenital system.
8. Surface Anatomy

B. Neuro-anatomy: Microscopic and gross study of:

1. Peripheral Nerves
2. Neuromuscular Junction
3. Sensory Organs

4. Spine Cord-Segment & Areas
5. Brainstem
6. Cerebellum
7. Inferior colliculi
8. Superior colliculi
9. Diencephalon
10. The Hypothalamus
11. The Epithalamus
12. The Thalamus
13. The Cerebral Hemispheres
14. The Corpus striatum
15. The Rhinencephalon
16. The Lateral Ventricles
17. The Meninges
18. The Blood supply of the Brain.

C. HUMAN PHYSIOLOGY

1. Structure of Human Cell
2. Elementary Tissues of Body
3. Blood, Composition, functions, Grouping Blood Disorders.
4. CVS (Cardio Vascular System). Structure of

Heart, Cardiac Cycle, Hypertension, Cardiac disorders reference to physiology.

5. Digestive system-Physiology anatomy, process of digestion, organs of digestion and disorders.
 6. Respiratory Sysem - Structural Physiology process of respiration.
 7. Excretory system; detailed structure of Kidney, functions, disorders
 8. CNS - Central nervous system; Structure of Brain, Neuron, Reflex action, automatic nervous system, cranial nerves.
 9. Elementary knowledge of structure and function of organs of taste, smell, eye and skin.
 10. Endosionology; All the endosine glands in detail.
 11. Reproductive system; Physiology / Anatomy
1. Introduction to Pathology
 2. Repair and inflammation
 3. Pathological terms
 4. Pathology of various organs.
 5. Role of Pathology in physiotherapy.
 6. Review of pathological changes of various organs and their treatment.
 7. Drugs action on central nervous system. Aenesthetics, alkaloids, narcotics, analgesics,

antipyretics, sedatives, anticonvulsants.

8. Drugs action on cardiovascular system, neuromuscular system, respiratory system.
9. Drugs acting with Peripheral Nervous system.
10. Chemotherapy
11. Hormones and drugs effecting Endocrine functions.
12. Vitamins
13. Metallic and other Inorganic compounds.
14. Immunological agents
15. Diagnostics.

D. EXERCISE THERAPY & MASSAGE

1. Mechanical anatomy of motion and posture.
2. Exercise of the shoulder and Hip and evaluation.
3. Exercise of the Foot and Hand evaluation.
4. Exercise of the knee and elbow and evaluation.
5. Vicarious motion.
6. Joint motion assessment.
7. Manual muscle examination.
8. The therapeutic gymnasium
9. Exercise in water
10. Resistance exercise

11. Brief isometric exercise
12. Exercise based on Neuro Physiological Principles.
13. Crutch and cane exercises.
14. Gait training.
15. Principles of therapeutic exercises.
16. Postures.
17. Exercises for healthy persons
18. Activities of daily living.
19. Exercise of Spine
20. Massage
21. Suspension Therapy
22. Neuro muscular co-ordination
23. Starting positions.
24. Cryotherapy.

1st YEAR **PAPER - B**

A. MEDICAL ELECTRONICS (Electro Therapy)

1. Electrical Fundamentals
2. Electron tubes
3. Power supplies
4. Amplifiers
5. Oscillators
6. Cathode ray tubes
7. Transistors
8. Recorders
9. Transducers
10. Radiation
11. Principles of designs and circuits of infrared and ultra violet generators, shortwave diathermy, microwaves, ultrasonics and electrical stimulators.
12. Signal processes
13. Display devices and indicators
14. Magnetic tape records
15. Data transmission and Processing.

B. ACTINO - THERAPY

1. Physics of heat
2. Thermometry
3. Biophysics of diathermy
4. Physiology of heat and cold.
5. Thermal radiation, pain and injury.

6. General principle of thermotherapy
7. Conducting heating
8. Luminous and infra-red heating
9. High frequency instrumentation
10. Short wave diathermy
11. Microwaves
12. Ultrasound therapy
13. Instrumentation of electrotherapy
14. Therapeutic electro stimulation
15. Ionotophoresis
16. Electrosleep Therapy and anaesthesia
17. Instrumentation for Ultraviolet therapy
18. Physiological affects of Ultraviolet radiation.
19. Low frequency currents
20. T.N.S.
21. Inteferential therapy
22. Wax Therapy

C. ELECTRO-PHYSIOLOGY

1. Bio - Electricity
2. Electric potentials generated by cell
3. Electrogenic membrane response.
4. Chemoresponsive electrogenic system
5. Propagation of nerve impulse
6. Neuromuscular Junction.
7. Synapse
8. Muscle Electrogenic
9. Electrophysiology of C.N.S.

10. Chronaxy
11. Strength duration curves.
12. Electrical duration curves.
13. Electromyography
14. Nerve conduction studies
15. Microneurography
16. Reflex Physiology Monosynaptic and Polysynaptic reflexes
17. Spinograms
18. Cerebral evoked potentials.

D. PSYCHOLOGY

1. Definition and Scope of Psychology in relation to Occupational Therapy Physiotherapy.
2. Methods of studies in Psychology.
3. Psychological Development of Human individual from conception to birth to old age.
4. Special needs, characteristics and problems of the various groups of Handicapped.
5. Learning, factors affecting learning, disabilities techniques to deal with Implications of various handicaps in the learning process. Principles of

learning for various handicapped groups, Techniques of motivating the handicapped children.

6. Adjustment, criteria of mental health, adjustment problems faced by handicapped children, counseling and guidance with special reference to the physically and mentally handicapped.
7. Interaction with the family, community and poor groups Communication pattern, specific problems faced by handicapped, development of social skills and sensitivity training.
8. Role of Psychologist in Rehabilitation of the handicapped.

2nd YEAR **PAPER - A**

A. General Medicine including Respiratory Diseases

1. Infection and antibacterial agents
2. Infections and Diseases
3. Poisons and Venoms
4. Chemical and Physical agents carrying diseases
5. Diseases of Metabolism.
6. Deficiency Diseases
7. Diseases of Endocrine Glands.
8. Diseases of Digestive System.
9. Diseases of Lymphatic System
10. Diseases of Blood
11. Diseases of Cardio-vascular system, Circulatory failure, Ischemic heart disease, Hypertension Pulmonary Heart Diseases, Congenital heart Disease, Peripheral vascular diseases, Embolism and thrombosis, Collagen diseases.
12. Diseases of the Respiratory System-the trachea, the bronchi, the lungs, the diaphragm, the pleura.
13. Diseases of the Kidney
14. Diseases of the Skin sensory disorders, Pigmentary Anemias, vasomotor, Disorders, Dermatitis, Coccal Infections, Fungus Infections, Cutaneous, Tuberculosis, Virus infection, Parasitic infections, Erythematous conditions,

Scleroderma and Allied conditions, Atrophy and Hypertrophy, Diseases of the Hand, Tropical skin diseases.

15. Psychiatry:

1. Definition and introduction to Psychiatry in relation to OT & PT
2. Concept of normal and abnormal
3. Behavior disorders : -Causes & management
 - a) Psychoneurotic disorders.
 - b) Psychotic disorders
 - c) Psychosomatic disorder
4. Techniques of Therapy
 - a) Psycho Therapy:
 1. Group Therapy
 2. Psychodrama
 3. Behaviour modification.

B. General Surgery including Cardio-vascular and Thoracic Surgery

1. Surgical wounds, haemorrhage, Shock, Water and Electrolyte Balance. Burns
2. Surgery of head and neck, alimentary systems and genito -urinary system x.
3. Neuro Surgery
4. Cardio-Vascular and Thoracic surgery
5. Gynaecology and Obstetrics: Pelvic inflammatory conditions, complications during and following pregnancy prolapse

uterus

6. E.N.T.

C. ORTHOPAEDICS

1. Postural defects anteroposterior and laterl curve of the spine, the feet genu valgum genu varum.
2. Back pain.
3. The Spine, the intervertebral disease, Osteoporosis, Ankylosing spondylitis, Spina bifida, Torticollis, Tuberculosis of the spine and sacro-illac joints, Osteomyehtis, Tumours.
4. The Hip congenital dilocation, coxa vara, tuberculos bursits.
5. The knee-injuries to medial ligament, lateral ligament, Semulunar cartilages, Cruciate ligament, chronic strain, chondromalacia patella, locking Rheumatoid Arthritis, Osleoarthrits, Synovitis, Clicking knee tuberculosis.
6. The foot and ankle painful feet, pescavus, halux valgus gout, painful heel, the ligaments of the ankle tuberculosis.
7. The foot and ankle painful feet, pecavus, hallux valgus Gout painful heel the ligaments of the ankle, tuberculosis, stress fracture.
8. The shoulder girdle pain the shoulder,

Cervical Spondylosis, Carpal Tunnel Syndrome, Cervico Brachial Junction, Recurrent dislocation of the shoulder, Tuberculosis.

9. The elbow tennis elbow, myositis ossificans, ulnar palsy, tuberculosis.
10. The wrist and hand tenosynovitis, tuberculosis ganglion, rupture of tendons contractures.
11. Pyogenic infection.
12. Tuberculosis
13. Chronic arthritis rheumatoid and osteoarthritis
14. Diseases of nervous system, poliomyelitis, cerebral Palsy.
15. Common fractures of spine and extremities.
Trauma Therapy
Play therapy
Drug therapy
E.C.T.
16. The Cranial Nerves
17. Infections of the Nervous System
18. Disorders of the Cerebral Circulation
19. Tumours and the nervous system.
20. Congenital and degenerative disorders

D. PHYSICAL THERAPY IN NEUROLOGICAL CONDITIONS / MEDICAL CONDITIONS

1. Examination of Neurological disorder and

principles of treatment

2. Hemiplegia, paraplegia, Cerebral Palsy, Tabes dorsalis, Cerebellar ataxia, extra pyramidal lesions.
3. Disseminated sclerosis muscular atrophy, amyotrophic lateral sclerosis, progressive muscular atrophy, Syringomyelia, sub acute combined degeneration of cord.
4. Peripheral Nerves Lesions.
5. Neuritis and Neuralgia Brachial Sciatica and Facial Palsy.
6. Infections-Poliomyelitis, Meningitis, Encephalitis, Polyneuritis
7. Myopathies
8. Paediatrics and Geriatrics
 | Special problems of elderly and children related to special conditions to which they are prone;
 Treatment as modified to other particular needs of each age groups.
9. Pathological conditions.
 Review of Pathological changes and principles of the treatment by Physiotherapy of: Inflammation
 acute Chronic and Suppurative.
 Oedema Traumatic, Obstructive, Paralytic. Oedema due to poor muscle and laxity of the fascia.
10. Arthritis and Allied conditions.
11. Osteo arthritis generalized, degenerative and traumatic, spondylosis and disorders
12. Rheumatoid Arthritis, stills disease, infective arthritis

13. Spondylitis, Ankylosing spondylitis
14. Non articular Rheumatism Fibrositis, Myalgia, Bursitis, peri-arthritis etc.

E. Diseases of the Respiratory System:

1. Mechanism of Respiration.
2. Examination of chest of patient and principles of physiotherapy treatment.
3. Bronchitis, Asthma, Lung Abscess, Bronchiectasis, emphysema
4. Pneumonia
5. Bacterial Disease - Tuberculosis
6. Tumors.
7. Deficiency Diseases:
(Rickets, osteomalacia etc.)

F. PHYSICAL THERAPY IN SURGICAL CONDITIONS

1. Fractures and dislocations
2. Types of displacement
3. Changes at fracture site and its surrounding tissues
4. Healing of Fractures and factors influencing it.
5. Common fractures of Upper and Lower extremity and their complications.
6. Methods of reduction and fixation.
7. Crush injuries
8. Repair of injured tendon and nerves
9. Other miscellaneous Orthopaedic conditions commonly treated by Physiotherapy.

10. Traumatic, elective, common sites of amputation in Upper & Lower extremities Advantages disadvantages Physical Therapy treatment as applicable to care of Prosthetic training with emphasis on Lower extremity.
11. Complications common to all operation; pre and post operative Physiotherapy.
12. Burns - Degree, Grafting of skin.
13. General abdominal Surgery and Obstetrics and Gynaecology.
14. Thoracic incisions pre and post operative treatment and later rehabilitation of the patient.
15. Common complications with emphasis to atelectasis pneumothorax, bronchopulmonary fistula, pre and post operative physiotherapy related to Cardio thoracic surgery.
16. Operations on Pericardium and Heart, Chronic constrictive pericarditis, valvular incompetence and Stasis, mitral, valvotomy, tetralogy of Fallot.
17. Cranial Surgery:
18. Head Injury, Intra cranial abscess, intracranial Tumours.
19. Surgery of spinal cord and Cauda Equina.
20. Surgery of Peripheral Nerves, peripheral nerve injuries, pre and post operative physiotherapy treatment related to above conditions.
21. Pre and Post Operative Physiotherapy, related to Plastic Surgery.

PAPER - B

A. Bio-Mechanics and Kinesiology

1. General Principles
2. Force, axis, planes, centre of gravity leavers
3. Classification of force systems
4. The linear force system resultant force equilibrium
5. Parallel forces in one plance
6. Friction
7. The fundamental principles of motion
Causes and kinds of motion, kinds of motion experienced by body and factors determining it, laws of motion, circular motion etc.
8. Locomotion.

B. DISABILITY PREVENTION AND REHABILITATION

1. Introduction
2. Definition concerned in the phase of disability process
3. Definitions concerned with cause of impairment, factional limitation and disability.
4. Rehabilitation and Disability prevention.
5. Present rehabilitations services.
6. Reservation & Legislation for rehabilitation services for the disabled.

7. Contribution of Social worker towards rehabilitation
8. Vocational evaluation and goals for disabled.
9. Rural rehabilitation in-corporated with PHC's
10. Principles of Orthotics & Prosthetics:
 - ❖ Lower Extremity orthotics/Upper extremity orthosis
 - ❖ Spinal Orthotics
 - ❖ Upper extremity Prosthetics
 - ❖ Lower Extremity Prosthetics
11. Principles of Communication: Impairment
 - ❖ Speech Production
 - ❖ Communication disorders secondary to Brain damage
 - ❖ Aphasia and its treatment
 - ❖ Dysarthria and its treatment
 - ❖ Non-aphasic language disorders
12. Principles in Management of Social Problems:
 - ❖ Social needs of the patient.
 - ❖ Rehabilitation Centre Environment
 - ❖ The Social Worker as a Member of the Rehabilitation Team
 - ❖ Community Resources
13. Principles in Management of Vocational Problems:
 - ❖ Vocational Evaluation
 - ❖ Vocational goals for the disabled
14. Mental Subnormality:
 - ❖ Identification and assessment of the mentally

subnormal

- ❖ Classificaion of the Mentally subnormal.
- ❖ Common characteristics of different categories of the mentally subnormal
- ❖ Causes prevention and management of the mentally subnormal
- ❖ Training of the mentally subnormal

15. Definition scope and importance of A.D.L.
16. Goals of Self Help Devices
17. Teaching A.D.I. in the following areas:
18. Principles of design materials used
19. A.D.L. Form
20. A.D.L. Room
21. Relationship of A.D.L. to occupational Therapy and Physiotherapy
22. Practicals:
 - ❖ Eating device, Bathing device, Shoe wearing adapted device, Brushing device, Combing device, Writing device, Leather cuff computee, Helping hand, soaking devices.
23. National Health Programmes
24. Bio Medical Waste Management.

1st YEAR

Anatomy & Physiology Including Histology

A. PRIMARY (FIRST YEAR)

ANATOMY (GENERAL AND DENTAL)

General structures

- i. Muscles - Especially muscles of mastication & facial expression.
- ii. Bones - Bones of skull-Especially Maxilla, Mandible and Facial, Bony Joints especially Tempo-mandibular joint.
- iii. Blood Vessels
- iv. Lymphatics
- v. Glands-Especially Submandibular, Sub-lingual and Parotid.
- vi. Nerves

DENTAL ANATOMY:

- i. Parts of a Tooth:
- ii. Human Dentition-Primary/Deciduous, and permanent/secondary-Different stages of human dentition. Difference between primary and permanent dentition.
- iii. Tooth Numbering Systems:
 - a) FDI
 - b. Zsigmondy Palmer System
- iv. Sequence of Eruption of Primary and Secondary dentition and eruption dates; different types of Malocclusion.
- v. Functions of Teeth.
- vi. Gross morphology of teeth; tooth surfaces (mesial, distal, labial, lingual, incisal, occulusal), Cusps, ridges, lingulum, sulcus, grooves/fissure, pit & fissure, roots & root canals-brief.
- viii. Blood and nerve supply to the face, & associated structures.

a) Facial Nerve and Facial Artery.

b) Trigeminal Nerve.

- viii. Tongue-Muscles, Nerve and blood supply, taste buds.

HISTOLOGY:

- i. General Histology-Animal Cell Structure, structure of mucous membrane.
- ii. Dental Histology - Enamel, Dentin, Pulp, Gingiva, periodontal Ligaments, Cementum.

PHYSIOLOGY:

- i. Blood-Composition, function etc. in detail.
- ii. Cardiovascular system-Pulmonary & System circulation.
- iii. Respiratory System in brief.
- iv. Excretor System in brief.
- v. Digestive system - structure, function, digestive secretions etc.

vi. Dental Physiology-

- a) Saliva - Composition, function, different types of saliva (i.e. Mucous, serous, mixed).
- b. Mastication and deglutition.

PRACTICAL

Study of prepared histological slides of oral and dental tissues, Sections of a tooth, Routine blood and urine examination.

B. PHARMACOLOGY, PATHOLOGY AND BACTERIOLOGY / MICROBIOLOGY:

PHARMACOLOGY:

- i. General Pharmacology.
- ii. Antibiotics- especially - Penicillins, Tetracyclines, Metronidazole, Ciprofloxacin (Functions, dosage, uses, contraindications, adverse reactions etc.)

- iii. Analgesics- Steroids, Non-steroidal and anti-inflammatory.
- iv. Anaesthesia- General and Local
Local- Composition and function of each component, dosage, classification, action, adverse reaction and route of administration.
- v. Hypnotics, Sedative and Epileptic drugs - in brief.
- vi. Drugs used in hypertension.
- vii. Drugs acting on GIT (Antacids, H₂ blockers - ranitidine) brief.
- viii. Dentrifices - Composition (function of each component - dental).
- ix. Mouthwashes and Gumpaints.

PATHOLOGY: (Including Microbiology and Bacteriology)

- i. General Principles of Pathology - inflammation, degeneration and repair.
- ii. Dental Anomalies-
a. Development defects of the jaws-

- Agnathia, Micrognathia & Macrognathia.
- b. D.D. of Lips and Palate - Cleft lip, Cleft palate.
- c. D.D. of Tongue- Microglossia, Macroglossia, Ankyloglossia.- Cleft and Fissured Tongue, Hairy tongue.
- d. D.D. of Salivary Glands - Aplasia of salivary gland, Xerostomia
- f. D.D. of size of teeth - Microdontia and Macrodontia.
- g. D.D. of shape of teeth - Gemination, fusion, concrescence. dilaceration, talon cusp, dense in dente, dense evaginatus, taurodontism, upernumery roots.
- h. D.D. in number of teeth - Anodontia, supernumery teeth.
- i. D.D. of structure of teeth- Amelogenesis Imperfecta - Hypoplastic, hypocalcified, hypomaturation.
 - Environmental enamel hypoplasia

- Dentogenesis imperfecta in brief.
- J. Disturbance in the Eruption of the teeth - Premature, Delayed and Impacted.
- k. Regressive alterations of teeth - Abrasion, Erosion, Attrition.
- i. Pathology of Dental Caries - Defition, etiology of dental caries-acidogenic, proteogenic, proteolysis -chelation theory
 - Contributing factors in dental caries
 - Clinical aspects of dental caries
 - Microbiology of dental caries - in brief.
 - Methods of Caries control.
- m. Diseases of the pulp - Etiology of pulp diseases and its classification.
- n. Diseases of Periapical tissues - Periapical granuloma, apical periodontial cyst and periapical abcess.
- o. Oral Manifestation of Systemic Disease - Diabetes Mellitus, Hypertension, Anaemia, Thyroid Disorders, Vitamin Deficiency

disease, Syphilis, Tuberculosis, Herpes simplex, Measles, Aphthous ulcers.

BACTERIOLOGY:-

Elementary knowledge of Bacteriology; infection, immunity; asepsis; brief description of dental caries & gingival infections.

C. RADIOLOGY AND FOOD NUTRITION

RADIOLOGY

- i. Production of X-Rays
- ii. Exposing Factors relating to X-Rays.
Exposure Time (Kvp.mAs), FFD, Collimation, Filtration.
- iii. Radiation Hazards and their protection for the patient and operator.
- iv. X-Ray films- Structure and image formation.
Intra-Oral, Peri-apical, Bitewing, Occulusal.
- v. Intra-Oral Techniques
Bisecting angle and paralleling.

- Principle, Placement of film, angulation of tube during radiography.
- vi. X-Ray film processing
- vii. Artefacts on the finished radiographs.
- viii. Extra-Oral Radiology
 - Indications
 - OPG and Cephalometry.

FOOD & NUTRITION

- i. **Carbohydrates:** Definition - Types -
Monosaccharides, disaccharides,
Oligosaccharides, Polysaccharides
Metabolism of Carbohydrate - in brief.
Introduction to diabetes in brief.
- ii. **Lipids-** Definition - Types - Simple, Compound,
Waxes.
Properties of Simple lipids (Fats)
Fatty Acids - definition, Types.
- iii. **Proteins -** Definition - Classification.
Amino Acids - Definition, Classification.

Protein Caloric Malnutrition in brief.

iv. **Vitamins-** Definiton - Classification.

Vitamin-A,C, D, E, K, and Vitamin B complex.

v. **Minerals-** Definition - Classification.

Macro and Micro

vi. **Water-** In brief.

vii. **Balanced Diet.**

D. GENERAL DENTISTRY INCLUDING ORAL SURGERY

General knowledge of various materials used in Dentistry such as impression material, Gypsum products, waxes investing materials and various filling materials for temporary and permanent restoration.

2nd YEAR

A. DENTAL HYGIENE AND ORAL PROPHYLAXIS

- Objectives of dental hygiene
- Oral Prophylaxis
- Stains - Intrinsic & extrinsic stains and their management Dental Plaque and Dental Calculus.
- Brief description & Management of Gingivitis, Periodontitis, Periodontal abscess.
- Gingival Enlargement
- Periodontal grade II - Medically compromised patients - in brief.
- Instruments and Technique of oral prophylaxis
- Polishing of Teeth
- Topical application of flurides
- Care of oral cavity and appliances during treatment of Maxillo- facial cases.

B. DENTAL HEALTH EDU. SOCIAL & PUBLIC HEALTH DENTISTRY, CONSERVATIVE AND PREVENTIVE DENTISTRY.

- i. Definition:- Health, Dental Public Health
- Health education for the general public objectives, Functions and Services Provided by the Dental Public Health Dentistry.
- ii. Periodontitis & Gingivitis.
- iii. Levels of prevention.
- iv. Plaque and Plaque control
- v. Calculus and Types.
- vi. Maintenance of Oral Hygiene (in detail)
- vii. Pit & Fissure Sealants (in detail)
- viii. Various Interdental Aids (in detail)
- ix. Types of Tooth Brush and tooth Brushing methods
- x. Effects of Improper tooth brushing
- xi. Dentifrices (in detail)
- xii. Disclosing Agents (in detail)
- xiii. Oral Cancer

- xiv. Malocclusion and Angle's Classification of Malocclusion
- xv. Habbits affecting the Oral Musculature
- xvi. Dental Auxillary and its types.
- xvii. Flourides in detail
- xviii. Dental caries - Prevalence and prevention.
- xix. Periodontal disease
- xx. Dental Health and Disease.
- xxi. Dietary Habits and Dental Health.

C. OPERATING ROOM TECH. DENTAL MATERIALS. DENTAL ETHICS & JURIS-PRUDENCE, ORIENTATION IN DENTISTRY.

- Brief overview of physical properties and mechanical properties.
- Impression Materials - Hydrocolloid, Rubber based impression material.
- Inelastic Impression Material - Zinc Oxide eugenol impression paste, Impression compound.

- Gypsum Products- Types according to composition and uses.
- Proportioning, mixing technique, factors affecting its setting time.
- Synthetic Resins - Composition in brief, Types of resins (Cold Cure and Heat Cure, their properties, methods of processing and usage) Cross linked resin.
- Waxes - Types method of use & uses and bases plates.
- Liner Varnishes.
- ZnO Eugenol- Zn Phosphate; Varnish; Zn Polycarboxylate; GIC, $\text{Ca}(\text{OH})_2$, Filling Material, Silver amalgam, Composite resin (LC, SC), Materials used in root Canal Treatment - Hydrogen peroxide & Sodium hypochloride, saline paper points, Root canal sealant, Intra Canal medicaments & Filling Materials.
- Stainless Steel Wires.

Cleaning & Maintenance of Dental Chair and Equipments

- Functional Maintenance of dental chair and related equipments.
- Sterilisation and Upkeep of the dental instruments.
- Upkeep of dental materials.

Orientation in Dentistry

- Various branches of dentistry

D. CHAIR-SIDE ASSISTANCE

Reception of a patient, lay-out of reception room, Dental Surgery Chamber and Dental Hygienist Clinic, chair-side assistance and Techniques, Local anesthesia and Equipments. Methods of sterilization and care of Dental Instruments, Basic principles in surgery, the use of instruments in Dental practices, examination of oral cavity and charting of teeth.

E. PROSTHO-DONTICS AND COSMETOLOGY

- Introduction and applied Anatomy

- History taking and examination
- Simple surgical preparation and impression taking.
- Phonetics and Anatomical articulation.
- Connectors (major and minor) with functions.
- Retainers (Direct and Indirect)
- Dentures - Functions, Biomechanics, Survey, Diagnosis, planning Aides to retention and relief.
- Cosmetology and Appearance.
- Dental materials and its manipulation.

F. ORTHODONTICS

- Etiology, classification and mal-occlusion
- Skeletal maturation, Growth and Definition with special reference to endocrines.
- Classification of dento-facial abnormalities, anthropometries, cephalometries etc.
- Principles of mechano-therapy:- Basics about tweed method, twin-wire appliance, activators.