

PHASE III, PART II

PEDIATRICS

Pediatrics including Neonatology

a) Goals

The course includes systematic instructions in management of common diseases of infancy and childhood, evaluation of growth and development, nutritional needs, and immunization schedule in children, social pediatrics and counseling is also dealt in the course. The aim of teaching for undergraduate medical students is to impart appropriate knowledge and skills to optimally deal with major health problems and also to ensure optimal growth and development of children

b) Objectives

Knowledge

At the end of the course student will be able to:

1. Describe normal growth and development during foetal, neonatal, child and adolescence period.
2. Describe the common pediatric disorders and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation.
3. State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease.
4. Describe preventive strategies for common infectious disorders, poisonings, accidents and child abuse.
5. Outline national programmes relating to child health including immunization programmes.

Skills

At the end of the course, the student shall be able to:

1. Take a detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.
2. Distinguish between normal newborn babies and those requiring special care and institute early care to all newborn babies including care of preterm and low birth weight babies.
3. Take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under

- current national programmes, perform venesection, start an intravenous line and provide nasogastric feeding.
4. Would have observed procedures such as lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascitic tap.
 5. Provide appropriate guidance and counseling in breast feeding.
 6. Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.
 7. Be aware and analyse ethical problems that arise during practice and deal with them in an acceptable manner following the code of ethics.

Integration

The training in pediatrics should prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of a team in an integrated form with other disciplines eg. Anatomy, Physiology, Forensic medicine, Community Medicine and Physical Medicine and Rehabilitation.

c) **Course Contents**

VI TERM - 14 CLASSES

VITAL STATISTICS:

1. Introduction to age related disorders
IMR, PMR, EPMR,
Child Mortality and Morbidity.
2. Preventive pediatrics
Different national programmes - ICDS, MCH, RCH, CSSM, IMCI, RCH

NEONATOLOGY:

3. High risk pregnancy and high risk neonates.
4. Classification of newborn & Gestational age assessment.
5. Normal newborn & newborn care.

GROWTH & DEVELOPMENT:

6. Growth and development, parameters of growth, growth monitoring.
7. Developmental milestone and assessment of development.

NUTRITION:

8. Normal nutritional requirements of different age groups.
9. Breast feeding & lactation failure management.

10. Infant feeding.
11. Protein Energy malnutrition Part I.
12. Protein Energy malnutrition Part II.
13. Vitamin deficiencies – Fat soluble.
14. Vitamin deficiencies – Water soluble.

VII TERM

13 CLASSES

INFECTIONS:

1. Exanthematous illness: Measles, Rubella, chickenpox, Mumps etc. - *Sarjan*
2. Typhoid fever.
3. Tuberculosis part - 1.
4. Tuberculosis part - 2.
5. Parasitic infestations.
6. Acute central nervous system infections – bacterial.
7. Acute central nervous system infections – viral.
8. Malaria – symposium.

NEONATOLOGY

9. Respiratory distress in new born.
10. Birth Injuries
11. Low birth weight babies.
12. Congenital anomalies (Diaphragmatic hernia, Cleft palate, Cleft lip, Pyloric stenosis).

VIII TERM

19 CLASSES

NEONATOLOGY :

1. Neonatal jaundice.
2. Prolonged cholestatic jaundice.
3. Neonatal infection.

GENETICS:

4. Genetic terminology and definitions, Common genetic disorders (Down Syndrome).

PEDIATRIC EMERGENCIES:

5. Shock in children.
6. Poisoning in Children - Prevention/Management
7. Snake bite and Scorpion sting.

✓ **CENTRAL NERVOUS SYSTEM:**

8. Cerebral palsy.
9. Mental retardation other than cerebral palsy.
10. Hydrocephalus.
11. Seizure disorders (including febrile seizures).

GASTROENTEROLOGY:

12. Viral Hepatitis.
13. Cirrhosis of liver.

NEPHROLOGY:

14. Nephritis.
15. Nephrotic syndrome.
16. Urinary tract infection.

CARDIOLOGY:

17. Rheumatic fever.
18. Cyanotic congenital heart diseases.
19. Acyanotic congenital heart diseases.

IX TERM

17 CLASSES

ENDOCRINOLOGY:

1. Common endocrinal disorders – hypothyroidism.
2. Juvenile diabetes.
3. Short stature-evaluation.

RESPIRATORY SYSTEM:

4. Acute upper respiratory tract infections including Croup syndrome.
5. Acute LRTI (Pneumonia & Bronchiolitis).
6. Foreign body and suppurative lung disease.

EMERGENCIES:

7. Fluid & Electrolyte disturbances.

HAEMATOLOGY:

8. Leukemia lympho-reticular malignancy.
9. Nutritional anaemia.
10. Hemolytic anaemia

NEONATOLOGY:

11. Neonatal seizures

INFECTIONS:

12. HIV infection (prenatal / perinatal / postnatal)
13. Dengue hemorrhagic fever.

BEHAVIOURAL PROBLEM

14. Pica, Enuresis, Breath holding attack.

MISCELLANEOUS:

15. JRA.
16. Communication skills and counseling the parents.
17. Ethical consideration in pediatric practice with case illustrations (2 cases).

The topics for integrated teaching involving other faculties. (Two hours each).

1. Bleeding & coagulation disorders.
2. Coma.
3. PUO.
4. Jaundice.
5. Anaemia.
6. High risk pregnancy and neonate (with Obstetrics and Gynecology).
7. Renal failure.
8. Rheumatic Heart Disease.
9. Portal hypertension.
10. Tuberculosis.
11. Malaria.
12. Fetal & postnatal development (with Obstetrics and Gynecology).
13. Cerebral palsy.

Demonstration:

1. Nutritional exhibition.
2. Immunisation:
Administration of vaccines, vaccine preventable diseases, National immunization programme, individual vaccines, Newer vaccines, pulse polio, cold chain.
3. Gastroenteritis, DTU.
4. Bronchial asthma including management of status asthmaticus.
5. Resuscitation of newborn.
6. Developmental assessment.
7. Pediatric procedures.

d) Teaching hours

Theory: Total number of theory hours will be 100 hrs.

Clinical postings: Total No of weeks of clinical postings = 10 weeks.

6th / 7th term = 4 weeks.

8th / 9th term = 6 weeks

e) Scheme of Examination

Internal Assessment : Total marks: 50, (Theory 30 and Clinical 20)

Theory: 30 Marks

Minimum of three examinations are recommended. The 9th term examination preceding the University examination may be similar to the pattern of University examination. Average of any two best marks obtained in the notified internal examination be taken into consideration for calculating internal assessment. The total marks be reduced to 30 and sent to the University.

Clinical: 20 Marks

The clinical internal assessment will be conducted at the end of each postings, that is, 2 clinical internal assessment examinations. The marks obtained in the clinical examination shall be reduced to 20 marks and sent to the University.

The internal assessment marks both theory and practical obtained by the candidates should be sent to the University at least fifteen days prior to the commencement of theory examination. Note that a student shall secure at least 50% marks of the total marks fixed for internal assessment in a particular subject in order to be eligible to appear in final university examination.

University Examination

Theory (Written Paper)

There shall be one paper of 3 hours duration, carrying 100 marks.

The pattern of questions would be of three types:

Long essay question - each question carrying 10 marks

Short essay question - each question carrying 5 Marks

Short answer question - each question carrying 3 Marks

Clinical

Clinical Total marks

80 marks

Suggested cases for clinical examination:

- Kwashiorkor, Marasmus.
- Meningitis/meningitic sequelae.
- Cerebral palsy.
- Hemiplegia.
- Rheumatic heart disease – M.S., M.R, Carditis.
- Congenital heart disease – VSD, PDA, TOF.
- Pneumonia.
- Empyema.
- Suppurative lung disease.
- Hepatosplenomegaly.
- Cretinism.
- Assessment of growth and development in a normal child.
- Assessment of dehydration

Viva voce 20 marks, includes questions on:

1. Nutrition
2. X-rays
3. Drugs
4. Instruments

Text Books Recommended

1. Indian Association of Pediatrics (IAP), Textbook of Pediatrics, Reprint, Jaypee.
2. Ghai OP, Textbook of Pediatrics, 5th edn.
3. Meharban Singh, Textbook of Neonatology, 5th edn., Sagar Publications.
4. Meharban Singh, Clinical methods, Sagar Publications.
5. Hutchison's Clinical Methods, 20th Ed. Reprinted 1996.

Books for Selected Reading

1. Nelson, Textbook of Pediatrics, 15th edn. Prism Publications.
2. Forfar & Arneil, Textbook of Pediatrics, 5th edn., Cambell & Meintosh.