
**CURRICULUM
FOR
2 YEARS DIPLOMA PROGRAMME
IN
CHILD HEALTH
(DCH)**



2007

**UNIVERSITY OF HEALTH SCIENCES
LAHORE, PAKISTAN**

SR.	CONTENTS	PAGE NO
1	Foreword	1
2	Aims and Objectives of the Course	3
3	Specific Learning Outcomes	4
4	Nomenclature and Duration	5
5	Eligibility Criteria for Admission	7
6	Recognition/Equivalence of the Degree and Institution	8
7	Content Outline	9
8	Methods of Instruction/Course Conduction	19
9	Log Book	21
10	Literature Review	23
11	Examinations	24
12	Recommended Books	29

FOREWORD

University of Health Sciences (UHS) Lahore was inaugurated by the President of Pakistan on the 3rd of October 2002 with the vision to explicitly address academic and research needs in the field of health sciences and allied disciplines and to uplift their existing level to bring them on a par with the international standards.

The mission of the University is to develop an intellectual nexus to provide excellence and innovation in medical education and research in order to;

- Impart knowledge and skills to health care providers to enhance their competence in providing community oriented and multi-disciplinary patient-centered care
- Train and produce researchers and specialists in basic and clinical medical sciences
- Establish and maintain continuing professional development programmes for the faculty
- Provide trained professionals and scientists/researchers for the field of Electro Medical/Bio-Medical disciplines
- Assure quality in health education and research at all levels

A university is the zenith of knowledge that imparts quality education and awards degrees for extensive educational attainments in various disciplines with attendant advancement for the development of intellectual community. Protection of traditional knowledge, making exploration about it and obtaining deep understanding of modern technology and research techniques are some of the responsibilities of any university.

UHS is running a number of courses in the field of health sciences in Punjab. The list extends from undergraduate level courses up to the doctorate level both in basic, clinical and allied health sciences.

Since its inception, certain vital tasks were taken into serious consideration by UHS, for instance, curricula development and their up-gradation were among the most important ones besides introduction of contemporary educational programmes.

UHS has revised and finalized curricula for undergraduate Medical/Dental Education, B.Sc Nursing, and Allied Health Sciences.

In keeping with its commitment for further improvement in the standard of medical education, UHS has taken an initiative to modify and improve one year postgraduate diploma courses to 2 years structured training programmes.

I do not believe in selling an old product in a new packing with a fresh label on it, just to do the job. Original products with actual outcomes for the society must be guaranteed. Being the Vice Chancellor of a public sector health university, I believe, it is my duty to remain vigilant and committed to the cause of improvement of the conventional medical and allied health sciences' curricula on regular basis. This will help produce technically sound professionals with advanced knowledge and skills.

Presently, UHS has designed and facilitated curriculum development committees for eleven clinical disciplines namely: DTCD, DPM, DMRT, DOMS, DLO, Dip. Card, DCH, DCP, DGO, DMRD and DA.

This document precisely briefs the details of updated curriculum for Diploma in Child Health (DCH) as prepared by the Experts' Committee.

I am pleased to acknowledge the efforts made by Prof. I. A. Naveed, the Department of Medical Education and the members of the committee for DCH consisting of: *Prof. Muhammad Yaqoob Kazi (SIMS), Prof. Atta Ullah Mazgar (QAMC) and Prof. Pervaiz Akbar Khan (NMC)*. The contributions made by them will go a long way in the education and training of doctors in this field.

I hope, the revised course will be able to meet the needs of latest trends in Paediatrics and will certainly produce competent mid-level specialists in the field, which is the main objective of this programme.

Prof. M. H. Mubbashar

Hilal-e-Imtiaz, Sitara-e-Imtiaz
MB, FRCP, FCPS Psych, FRC Psych, DPM
Vice Chancellor/ Chief Executive
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AIMS AND OBJECTIVES OF THE COURSE

AIM

The aim of 2 years diploma programme in Child Health is to equip medical graduates with relevant professional knowledge, skills and ethical values to enable them to apply their acquired expertise at primary and secondary health care organizations as non-academic consultants.

OBJECTIVES

DCH training should enable a student to:

1. Take a comprehensive and pertinent history of a patient presenting with paediatric ailments
2. Perform detailed physical examination in a rational sequence that is both technically correct as well as methodical
3. Elicit physical signs without discomfort to the patient
4. Evaluate patients in the setting of outpatients' department, hospital wards, ICUs and emergency
5. Order a set of relevant investigations considering availability, diagnostic yield, cost-effectiveness, side effects and implications for management
6. Comprehend Community Indicators related to child health
7. Aware of and can apply national and international guidelines for treatment and assessment
8. Counsel patients and relatives in patient's preferred language in elective and emergency situations in keeping with the principles of good communication skills, empathy and empowerment of patients
9. Exhibit emotional maturity and stability, integrity, ethical values and professional approach, sense of responsibility in day-to-day professional activities
10. Take proper informed consent for physical examination and ensure confidentiality and appropriate environment for physical examination
11. Act as an independent specialist at community level/Tehsil and District Headquarter Hospital
12. Show initiative and become life long self-directed learners tapping on resources including clinical material, faculty, internet and on-line learning programmes and library

SPECIFIC LEARNING OUTCOMES

Following competencies will be expected from a student completing 2 years course in DCH, student should be able to:

1. Discuss etiology, pathogenesis, epidemiology and management of disorders in paediatrics on topics mentioned in the list of course contents
2. Discuss principles of basic sciences as applied to paediatrics such as haemorrhage, blood transfusion, shock, re-hydration, infection, antibiotics/drug therapies, inflammation, repair and healing and sterilization of instruments
3. Formulate a working diagnosis and consider differential diagnosis
4. Decide and implement suitable treatments considering safety, cost factors, complications and side effects
5. Perform minor paediatric clinical procedures under supervision
6. Maintain follow-up of patients at appropriate intervals, recognizing new developments and/or complications and offering sensible management protocols
7. Identify common paediatric problems in a scientific manner while keeping in mind the logical reasoning and a clear understanding of their impact on human mind and body
8. Assess, classify and rehabilitate malnourished child
9. Understand clearly various Child Survival Programmes, their relevance, needs and impact on community and the methodology employed for implementation of all such programmes
10. Identify common chromosomal disorders and is able to provide genetic counseling

NOMENCLATURE AND DURATION

NOMENCLATURE OF THE PROPOSED COURSE:

The name of diploma course should be retained as DCH. This name has been recognized and established for the last many decades worldwide. The duration of courses should be two years structured training in a recognized department under an approved supervisor.

Course Title: D.C.H. (Diploma in Child Health)

Training Centers: Departments of Paediatrics (accredited by UHS) in affiliated institutes of the University of Health Sciences Lahore

Course Duration and Scheme of the Course:

Total Duration: 2 years structured training (6 months in Part I and one & a half year in Part II) in a recognized department under the guidance of an approved supervisor

Part I -SIX MONTHS

Theoretical Component

- Pathology
 - General Pathology
 - Basic Hematology
 - Basic Microbiology (Sputum, pus, urine, stool, CSF, aspirates)
- Principles of Pharmacology and therapeutics
- General, Community, Preventive and Social Paediatrics
- Nutrition
- Neonatology
- Behavioral Sciences
- Introduction to Biostatistics and Research

Clinical Component

- Emergency and ICU Care and regular ward duties

Part II- YEAR & a HALF

Theoretical Component

Specialty Oriented Training (both theoretical and clinical aspects)

Clinical Component

- OPD Training and ICU Care
- Ward Duties
- All basic procedures

ELIGIBILITY CRITERIA FOR ADMISSION

DOCUMENTS REQUIRED FOR THE ADMISSION

1. Completed DCH application form
2. Copy of MBBS degree with mark sheets of professional examinations and certificate of number of attempts in professional examinations
3. Copy of PMDC registration certificate
4. Three latest passport size photographs
5. Reference letters from two consultants, with whom the applicant has worked
6. Certificates of completion of required experience

GENERAL REQUIREMENTS

Candidates eligible for admission should have MBBS or equivalent qualification, registered with PMDC and can fulfill one of the following criteria:

- a. One year experience in Paediatrics as medical officer/house physician
- b. One year experience in General Medicine as medical officer/house physician
- c. Six months experience in Paediatrics and six months in allied specialty

SPECIAL REQUIREMENTS

1. Securing pass percentage in the entry test as determined by the UHS
2. Qualifying the interview successfully
3. Having up to the mark credentials as per UHS rules (no. of attempts in each professional, any gold medals or distinctions, relevant work experience, research experience in a recognized institution, any research article published in a National or International Journal)

REGISTRATION AND ENROLLMENT

- Total number of students enrolled for the course must not exceed 8 per unit
- UHS Lahore will approve supervisors for diploma courses
- Candidates selected for the courses will be registered with relevant supervisors and enrolled with UHS

RECOGNITION/EQUIVALENCE OF THE DEGREE AND INSTITUTION

After two years training course, candidate should be given status of mid-level specialist equivalent to any other similar qualification.

Accreditation related issues of the Institution:

1. Faculty

Properly qualified teaching staff in accordance with the requirements of Pakistan Medical and Dental Council (PMDC)

2. Adequate Space

Including class-rooms (with audiovisual aids), computer lab and pathology lab

3. Library

Departmental library should have latest editions of recommended books on Paediatrics, reference books for each subspecialty like; Paediatric Gastroenterology, Cardiology, Nephrology, Neurology, Haematology, Oncology, Infectious Diseases, Neonatology, Endocrinology, Pulmonology, General Pathology, Pharmacology and latest journals (two National and one International)

CONTENT OUTLINE

Part I DCH

A. PATHOLOGY

1. General Pathology

Cell Injury and adaptation

Cell Injury

- Reversible and Irreversible Injury
- Fatty change, Pigmentation, Pathologic calcification
- Necrosis and Gangrene

Cellular adaptation

- Atrophy, Hypertrophy,
- Hyperplasia, Metaplasia, Aplasia

Inflammation

- **Acute inflammation** --- Vascular changes, Chemotaxis, Opsonization and Phagocytosis
- Enlist the cellular components and chemical mediators of acute inflammation
- Differentiate between exudates and transudate

- **Chronic inflammation**

- Etiological factors, Granuloma

Cell repair and wound healing

- Regeneration and Repair
- Healing--- steps of wound healing by first and second intention
- Factors affecting healing
- Enlist the complications of wound healing

Haemodynamic disorders

- Define and classify the terms Edema, Haemorrhage, Thrombosis, Embolism, Infarction & Hyperaemia
- Define and classify Shock with causes of each.
- Describe the compensatory mechanisms involved in shock
- Describe the pathogenesis and possible consequences of thrombosis
- Describe the difference between arterial and venous emboli

Neoplasia

- Dysplasia and Neoplasia
- Differences between benign and malignant neoplasms
- Enlist the common etiological factors for neoplasia
- Define and discuss the different modes of metastasis
- TNM staging system and tumor grade

Immunity and Hypersensitivity

2. Basic Haematology

- Introduction to Haematology.
- Review of vascular system and Blood Constituents.
- Origin and Development of Blood cells, Maturation of Erythrocytes and erythrocyte count.
- Blood formation:
 - Intrauterine.
 - Extrauterine.

- Factors which govern Haematopoiesis.
- Principles of Normal cell Maturation.
- Erythrocytes
- Maturation of Leukocytes, Leukocyte Count.
 - Origin.
 - Functions and biological Properties.
 - Maturation of Granulocytic Series.
 - Maturation of Lymphocytic Series.
 - Maturation of Monocytic Series.
- Haemoglobin:
 - Definitions of terms.
 - Metabolism of Haemoglobin.
 - Significance of Haematocrit AND ESR
 - Definition and principle of test procedures:
 - 1. Micro 2. Macro.
 - Blood Transfusion
 - Cross matching techniques
 - Infections and blood transfusions
 - Complications of blood transfusion
- Antiglobulin tests:
 - Direct Coomb's
 - Indirect Coomb's
- Rh Antibody tests:
- Erythroblastosis Foetalis:
 - Causes:
 - Rh incompatibility
 - Diagnosis and Management
 - ABO incompatibility
 - Diagnosis and Management
- Salient Pathophysiological and Clinical Features Of:
 - Megaloblastic anemia.
 - Red cell membrane defect: hereditary spherocytosis.

- Red cell enzymopathies.
- Thalassemia: Sickle cell anemia.
- Abnormal hemoglobins.
- Immune hemolytic anemias.
- Clotting and bleeding abnormalities
- Important /common leukemias

3. Basic Microbiology

- History and introduction to Microbiology
- Microbiology, Physiology, Life Cycle and Classification and parasites.
- Role of Microbes In Various Human Diseases
- Infection source
- A brief account of the classification of microorganisms .
- Morphology: Identification of various shapes of bacteria and viruses under the microscope.
- Distribution, size, motility, reproduction and functions of bacteria and viruses.
- Effects of environment upon bacteria and viruses.
- Sterilization and disinfection. Definition, use of physical and chemical disinfectants.
- Infection and immunity pathogenicity, pathology of infection, resistance and natural immunity, antigens and antibodies.
- Common Bacterial and viral diseases of man.
- Spores, Yeast and moulds.
- Nosocomial Infections
- Bacterial Growth and Death
- Important Viruses
- Important Parasites
- Sterilization and disinfection
- Immunization
- Use Of Investigation And Procedures In Laboratory
- Sputum, Urine, Stool, Cerebrospinal Fluid(CSF), Pus, Aspirates

B. PRINCIPLES OF PHARMACOLOGY & THERAPEUTICS

C. GENERAL, COMMUNITY, PREVENTIVE & SOCIAL PEDIATRICS

1. Orientation/state of Child Health
2. Primary Health Care
3. Community Diagnosis (Types & Questionnaire Development)

4. Role of Environment & Social Factors in Child Health
5. Safe Motherhood
6. Growth & Development in Children
7. Immunization (EPI & Surveillance)
8. Malnutrition (Assessment & Rehabilitation)
9. Nutritional Surveillance
10. Role of Vitamin A in Child Health
11. Role of Zinc in Maternal Child Health (MCH)
12. Baby Friendly Hospital
13. Save the Newbom Initiative
14. Breast Feeding & Lactation Management
15. Infant Nutrition
16. Communicable Diseases in Paediatrics
17. Parasitic Diseases in Children
18. Maternal & Neonatal Tetanus
19. Polio Eradication
20. Millennium Development Goals
21. HIV / AIDS & Child Health
22. Child Labour
23. Adoption
24. Care of Handicapped
25. Adolescent Health
26. Health Education, Counseling & Communication Skills
27. Genetic Counseling

D. NUTRITION

1. Malnutrition (Assessment & Rehabilitation)
2. Nutritional Surveillance
3. Role of Vitamin A in Child Health
4. Role of Zinc in Maternal Child Health (MCH)
5. Baby Friendly Hospital
6. Save the Newbom Initiative
7. Breast Feeding & Lactation Management
8. Infant Nutrition

E. NEONATOLOGY

1. Scope of Neonatology (definitions, neonatal, perinatal periods, live birth, still birth, abortion, legal viability, infant mortality, neonatal and perinatal mortality, morbidity, long term handicaps)
2. Organization of neonatal services, primary, secondary and tertiary level care, system of referral

3. Reviewing Role of obstetricians, Lady Health Visitors (LHVs), Traditional Birth Attendants (TBAs), nurses, concept of coordinated team work during perinatal period
4. Obstetric history and birth history including antenatal, natal and postnatal periods, maternal illnesses in relation to neonatal problems
5. Routine history, examination of new born (weight, length, head circumference, normal newborn examination, congenital anomalies, birth injuries, detailed examination along with checklist, neonatal reflexes)
6. Detailed categorization of the new born { term, pre-term, post-term, gestational assessment, Accurate Gestational Age (AGA), Small for Gestational Age (SGA), Large for Gestational Age (LGA), Intrauterine Growth Retardation (IUGR), scoring system, intrauterine growth charts)
7. Neonatal hypothermia (Pathophysiology, prevention and management techniques)
8. Organization of neonatal unit including neonatal equipment, appropriate adaptation at village, tehsil and district level)
9. Feeding of the newborn (breast feeding, formula feeding, techniques, types of formulas, lactation failure, par-enteral nutrition)
10. Birth anomalies (skeletal, visceral, systemic, associations, syndromes)
11. Neonatal infections (septicemia, early onset, late onset, congenital TORCH, nasocomial patterns, prevention, investigations, treatment, sequel, neonatal meningitis, localized infections (umbilicus, eye, skin, diarrhoea)
12. Neonatal Jaundice - etiology, type, diagnosis, management, prognosis
13. Respiratory Distress - common causes, manifestations, management referral
14. Cyanosis in newborn, recognition, differential diagnosis, management, referral
15. Seizures in the newborn, types, etiology, management, outcome, neonatal tetanus
16. Metabolic Problems: hypoglycemia, hypocalcaemia, other metabolic derangements, management
17. Anaemia in the newborn, causes, management
18. Hemorrhagic disease of the new born, other bleeding disorders
19. Neonatal surgical diseases (Necrotizing Enterocolitis, Gut Obstruction, Oesophageal Atresia & Tracheo-Oesophageal (TE) Fistula, Diaphragmatic Hernia, Imperforate Anus, Hirschsprung Disease)

F. BEHAVIOURAL SCIENCES

1. Bio-Psycho-Social (BPS) Model of Health Care
2. Use of Non-medicinal Interventions in Clinical Practice
 - Communication Skills
 - Counselling
 - Informational Skills
3. Crisis Intervention/Disaster Management
4. Conflict Resolution
5. Breaking Bad News
6. Medical Ethics, Professionalism and Doctor-Patient Relationship
 - Hippocratic Oath
 - Four Pillars of Medical Ethics (Autonomy, Beneficence, Non-maleficence and justice)
 - Informed Consent and Confidentiality
 - Ethical Dilemmas in a Doctor's Life
7. Delivery of Culturally Relevant care and Cultural Sensitivity
8. Psychological aspects of Health and Disease
 - Psychological Aspect of Health
 - Psychological Aspect of Disease
 - Stress and its management
 - Psychological aspect of Pain
 - Psychological Aspect of Aging

G. Introduction to Biostatistics and Research

1. Introduction to Bio-Statistics
2. Introduction to Bio- Medical Research
3. Why research is important?
4. What research to do?
 - Selecting a Field for Research
 - Drivers for Health Research
 - Participation in National and International Research
 - Participation in Pharmaceutical Company Research
 - Where do research ideas come from
 - Criteria for a good research topic
5. Ethics in Health Research
6. Writing a Scientific Paper

7. Making a Scientific Presentation
8. Searching the Literature

Part II DCH

A. INFECTIOUS DISEASES

1. Malaria
2. Enteric Fever
3. EPI Diseases { Polio, TB , Pertussis, Diphtheria, Tetanus, Hepatitis}
4. Child with Rash
5. Worm Infestations
6. Pyrexia of Unknown Origin (PUO)
7. Tuberculosis
8. Shigellosis
9. Cholera
10. Chicken Pox
11. Mumps
12. Antibiotic Therapy

B. HAEMATOLOGY & ONCOLOGY

1. Clinical Approach to Anaemia
2. Iron Deficiency Anaemia
3. Thalassaemia
4. G6PD Deficiency / Haemolytic Anaemias
5. Aplastic Anaemia
6. Thrombocytopenic Purpura
7. Clinical Approach to a Bleeding Child
8. Haemophilia & Von-Willebrand Disease
9. Acute Lymphoblastic Leukaemia
10. Lymphoma / Hodgkin's Lymphoma
11. Wilm's Tumour / Neuroblastoma

C. RESPIRATORY DISEASES

1. Pneumonia
2. Bronchiolitis
3. Bronchial Asthma
4. Pleural Effusion / Empyema
5. Pulmonary Tuberculosis
6. Pneumothorax
7. Croup
8. Foreign Body Inhalation
9. Otitis Media

D. GASTROENTEROLOGY & HEPATOLOGY

1. Hepatitis A, B, C, D, E.

2. Neonatal Hepatitis
3. Chronic / Autoimmune Hepatitis
4. Chronic Liver Disease / Cirrhosis
5. Hepatic Encephalopathy
6. Liver Abscess
7. Portal Hypertension
8. Clinical Approach to Bleeding from Upper / Lower GIT
9. Acute Diarrhoea & its Complications
10. Chronic / Persistent Diarrhoea
11. Malabsorption / Coeliac Disease
12. Inflammatory Bowel Disease
13. Ascites
14. D/D Abdominal Mass
15. Recurrent Abdominal Pain
16. Wilson's Disease
17. Constipation
18. Gastroesophageal Reflux
19. Acid Peptic Disease

E. NEPHROLOGY

1. Urinary Tract Infection
2. Acute Renal Failure
3. Chronic Renal Failure
4. Nephrotic Syndrome
5. Hematuria / Proteinuria; Clinical Approach
6. Acute Glomerulonephritis
7. Obstructive Uropathy
8. Urolithiasis

F. CARDIOVASCULAR DISEASES

1. Heart Failure
2. Cyanotic Congenital Heart Disease {Tetrology Of Fallot (TOF)}
3. Acyanotic Congenital Heart Diseases {Ventricular Septal Defect (VSD), Patent Ductus Arteriosus (PDA), Atrioseptal Defects (ASD)}
4. Rheumatic Fever
5. Hypertension
6. Viral Myocarditis
7. Common Rhythm Disorders {Paroxysmal Atrial Tachycardia (PAT)}

G. ENDOCRINE DISEASES

1. Short Stature
2. Hypothyroidism
3. Congenital Adrenal Hyperplasia
4. Ambiguous Genitalia
5. Diabetes Mellitus

6. Hypoparathyroidism
7. Addison's Disease
8. Obesity & Cushing's Syndrome

G. RHEUMATIC & ORTHOPEDIC DISEASES

1. Osteomyelitis
2. Septic Arthritis
3. Limping Child
4. Juvenile Rheumatoid Arthritis
5. Systemic Lupus Erythematosus
6. Henoch Schonlein Purpura
7. Dermatomyositis
8. Kawasaki Disease

H. NEUROLOGIC & NEUROMUSCULAR DISEASES

1. Bacterial Meningitis
2. CNS Tuberculosis
3. Space Occupying Lesions (SOL) / Brain Tumors
4. Epilepsy & Status Epilepticus
5. Febrile Fits
6. Mental Retardation
7. Hemiplegia
8. Muscle Dystrophies
9. Floppy Infant
10. Microcephaly
11. Cerebral Palsy
12. Guillain Barre Syndrome {Acute Idiopathic Polyneuritis (AIP)}
13. Hydrocephalus
14. Neural Tube Defects

I. METABOLIC, STORAGE & GENETIC DISORDERS

1. Rickets - Calcium Metabolism
2. Down's Syndrome
3. Congenital Malformations
4. Inborn Errors of Metabolism
5. Storage Disorders (General Approach)
6. Phenylketonuria, Tyrosinaemia
7. Mucopolysaccharidosis
8. Galactosaemia

J. CHILD PSYCHIATRY

1. General approach to common behavior disorders
2. Autism
3. Enuresis / Encopresis
4. Attention Deficit Disorder

5. Adolescent Behavior Disorders

K. TOXICOLOGY

1. General Principles of Management
2. Kerosene Oil Poisoning
3. Snakebite
4. Insecticide Poisoning
5. Corrosive Poisoning
6. Opioid Poisoning

L. CHILD ABUSE

1. Child Rights
2. Child Abuse
3. Child Labour

M. PAEDIATRIC SURGERY

1. Understanding Common Surgical Cases (Emergencies, Initial Management, Referral)
2. Cleft Palate/Lip
3. Acute Abdomen (Appendicitis, Intestinal Obstruction, Intussusception, Atresia, Malrotation)
4. Esophageal Atresia & Tracheo-Oesophageal (TE) Fistula
5. Hirschsprung's Disease
6. Inguinal Hernia / Hydrocoele
7. Undescended Testis
8. Club Foot
9. Imperforate Anus
10. Congenital Hypertrophic Pyloric Stenosis
11. Diaphragmatic Hernia
12. Rectal Polyp, Prolapse, Anal Fissure
13. Congenital Dislocation of Hips
14. Circumcision

N. DERMATOLOGY

1. Common Skin Infections {Scabies, Impetigo, Staphylococcal Scalded Skin Syndrome (SSSS)}
2. Eczema (Including Atopic)
3. Common Fungal Infections

O. MISCELLANEOUS

1. Immunodeficiency
2. Anaphylaxis & Allergies

METHODS OF INSTRUCTION/COURSE CONDUCTION

As a policy, active participation of students at all levels will be encouraged.

Following teaching modalities will be employed:

1. Lectures
2. Seminar Presentation and Journal Club Presentations
3. Group Discussions
4. Grand Rounds
5. Clinico-pathological conferences
6. SEQ as assignments on the content areas
7. Skill teaching in ICU, emergency and ward settings
8. Self study, assignments and use of internet
9. Bedside teaching rounds in ward
10. OPD & Follow up clinics
11. Long and short case presentations

In addition to the conventional teaching methodologies following interactive strategies will also be introduced to improve both communication and clinical skills in the upcoming consultants:

1.1. Monthly Student Meetings

Each affiliated medical college approved to conduct training for DCH will provide a room for student meetings/discussions such as:

- a. Journal Club Meeting
- b. Core Curriculum Meetings
- c. Skill Development

a. Journal Club Meeting

Two hours per month should be allocated to the presentation and discussion of a recent journal article related to Paediatrics. The article should be critically evaluated and its applicable results should be highlighted, which can be incorporated in clinical practice. Record of all such articles should be maintained in the relevant department of each medical college. Students of different medical colleges may be given an opportunity to share all such interesting articles with each other.

b. Core Curriculum Meetings

All the core topics of DCH should be thoroughly discussed during these sessions. The duration of each session should be at least two hours once a month. It should be chaired by the chief student (elected by the students of the relevant diploma). Each student should be given an opportunity to brainstorm all topics included in the course and to generate new ideas regarding the improvement of the course structure

c. Skill Development

Two hours twice a month should be assigned for learning and practicing clinical skills.

List of skills to be learnt during these sessions is as follows:

1. Communication skills
2. Physical Examination related to Paediatrics
3. Practical Skills i.e, use of relevant clinical instruments
4. Presentation Skills: Power-point, lectures, small group discussions, article presentation etc.
5. Research and Scientific Writing
6. Management of Paediatric Emergencies in Primary Care
7. For acquisition of procedural skills like Venous Cannulation, Lumbar Puncture, Pleural Tap, Peritoneal Tap, Endotracheal Intubation, Cardiopulmonary Resuscitation, Exchange Transfusions, Emergency Pneumothorax Drainage (Needle Aspiration), opportunities during ward postings should be availed

1.2 Annual Grand Meeting

Once a year all students enrolled for DCH should be invited to the annual meeting at UHS Lahore.

One full day will be allocated to this event. All the chief students from affiliated institutes will present their annual reports. Issues and concerns related to their relevant diploma courses will be discussed. Feedback should be collected and suggestions should be sought in order to involve students in decision making.

The research work done by students and their literary work may be displayed.

In the evening an informal gathering and dinner can be arranged. This will help in creating a sense of belonging and ownership among students and the faculty.

LOG BOOK

The trainees must maintain a log book and get it signed regularly by the supervisor. A complete and duly certified log book should be part of the requirement to sit for DCH examination. Log book should include adequate number of diagnostic and therapeutic procedures, routine and emergency management of patients, case presentations in CPCs, journal club meetings and literature review.

Proposed Format of Log Book is as follows:

Candidate's Name: _____

Roll No. _____

PROCEDURES:

1. Venous Cannulation
2. Lumbar Puncture
3. Pleural Tap
4. Peritoneal Tap
5. Endotracheal Intubation
6. Cardiopulmonary Resuscitation
7. Exchange Transfusions
8. Emergency Pneumothorax Drainage (Needle Aspiration)

Sr.#	Date	Name of Patient, Age, Sex & Admission No.	Diagnosis	Procedure Performed	Supervisor's Signature
1					
2					

Emergencies Handled

Sr.#	Date	Name of Patient, Age, Sex & Admission No.	Diagnosis	Procedure/Management	Supervisor's Signature
1					
2					

Case Presented

Sr.#	Date	Name of Patient, Age, Sex & Admission No.	Case Presented	Supervisor's Signature
1				
2				

Seminar/Journal Club Presentation

Sr.#	Date	Topic	Supervisor's signature
1			
2			

Evaluation Record

(Excellent, Good, Adequate, Inadequate, Poor)

Sr.#	Date	Method of Evaluation (Oral, Practical, Theory)	Rating	Supervisor's Signature
1				
2				

LITERATURE REVIEW

Students will be assigned a clinical problem most commonly encountered in the relevant specialty and will be specifically trained to review literature in the relevant field and write a '**Review of an Article**' comprising of:

- Topic
- Introduction
- Discussion of the reviewed literature
- Conclusion
- References

EXAMINATIONS

Assessment

It will consist of action and professional growth oriented ***student-centered integrated assessment*** with an additional component of ***informal internal assessment, formative assessment*** and measurement-based ***summative assessment***.

Student-Centered Integrated Assessment

It views students as decision-makers in need of information about their own performance. Integrated Assessment is meant to give students responsibility for deciding what to evaluate, as well as how to evaluate it, encourages students to **'own'** the evaluation and to use it as a basis for self-improvement. Therefore, it tends to be growth-oriented, student-controlled, collaborative, dynamic, contextualized, informal, flexible and action-oriented.

In the proposed curriculum, it will be based on:

- Self Assessment by the student
- Peer Assessment
- Informal Internal Assessment by the Faculty

Self Assessment by the Student

Each student will be provided with a pre-designed self-assessment form to evaluate his/her level of comfort and competency in dealing with different relevant clinical situations. It will be the responsibility of the student to correctly identify his/her areas of weakness and to take appropriate measures to address those weaknesses.

Peer Assessment

The students will also be expected to evaluate their peers after the monthly small group meeting. These should be followed by a constructive feedback according to the prescribed guidelines and should be non-judgmental in nature. This will enable students to become good mentors in future.

Informal Internal Assessment by the Faculty

There will be no formal allocation of marks for the component of Internal Assessment so that students are willing to confront their weaknesses rather than hiding them from their instructors.

It will include:

- a. Punctuality
- b. Ward work
- c. Monthly assessment (written tests to indicate particular areas of weaknesses)
- d. Participation in interactive sessions

Formative Assessment

Will help to improve the existing instructional methods and the curriculum in use

Feedback to the faculty by the students:

After every three months students will be providing a written feedback regarding their course components and teaching methods. This will help to identify strengths and weaknesses of the relevant course, faculty members and to ascertain areas for further improvement.

Summative Assessment

It will be carried out at the end of the programme to empirically evaluate **cognitive, psychomotor** and **affective domains** in order to award diplomas for successful completion of courses.

Eligibility to Appear in Final Examination

- Only those candidates will be eligible to take final examination, who have passed Part 1 examination (after 6 months of education) and have completed two years of structured/supervised training programme.
- Students who have completed their log books and hold certificates of 75% attendance should be allowed to sit for the exam
- Application for the final examination can be made with recommendation of the supervisor
- Only those candidates who qualify in theory will be called for clinical examination

DCH Examination

Part I DCH

Topics included in paper 1

- | | |
|--|-----------|
| 1. Pathology | (25 MCQs) |
| a. General Pathology | (10 MCQs) |
| b. Basic Hematology | (10 MCQs) |
| c. Basic Microbiology | (5 MCQs) |
| 2. Principles of Pharmacology and Therapeutics | (10 MCQs) |
| 3. Community and Preventive Paediatrics | (20 MCQs) |
| 4. Nutrition | (10 MCQs) |
| 5. Neonatology | (20 MCQs) |
| 6. Behavioral Sciences | (10 MCQs) |
| 7. Biostatistics and Research | (05 MCQs) |

Components of the Part-1 examination

MCQ Paper	100	One Best Type
Total Marks	100	Marks

Part II DCH

Topics included in paper 1

1. Infectious Diseases
2. Haematology and Oncology
3. Respiratory Diseases
4. Gastroenterology and Hepatology
5. Nephrology
6. Cardiovascular Diseases
7. Endocrine Diseases
8. Rheumatic and Orthopaedic Diseases
9. Neurologic and Neuromuscular Diseases

Topics included in paper 2

1. Metabolic, Storage and Genetic Disorders
2. Child Psychiatry
3. Dermatology
4. Immunodeficiency and Anaphylaxis & Allergies
5. Toxicology
6. Child Abuse

7. Paediatric Surgery

Part II Examination

Theory

<u>Paper I</u>	<u>100 Marks</u>	3 Hours
10 SEQs (No Choice)	50 Marks	
50 MCQs	50 Marks	
<u>Paper II</u>	<u>100 Marks</u>	3 Hours
10 SEQs (No Choice)	50 Marks	
50 MCQs	50 Marks	

The candidates who pass in theory papers, will be eligible to appear in the clinical & viva voce.

OSCE **90 Marks**

10 stations each carrying 9 marks of 10 minutes duration; each evaluating performance based assessment with five of them interactive

Clinical **90 Marks**

Four short cases each carrying 15 marks and one long case of 30 marks.

Components of the Part II examination

Theory paper 1	100 marks
Theory paper 2	100 marks
Clinical/Oral	180 marks
Log Book	20 marks
Total Marks	400

A panel of four examiners from Paediatrics (Two internal and two external) will be appointed for practical examination.

Each component of practical examination will be assessed by two examiners, awarding marks simultaneously and independently. The final score awarded will be an average score, as agreed by both examiners.

Pass Percentage and Other Regulations Regarding Examination

- Criterion referenced assessment principles will be used
- 20 marks for the log book will be included in the OSCE component
- 60 % marks will be a pass score in each component. Each candidate must pass in every component separately
- Candidate failing in any one component will have to re-sit the entire examination
- A maximum of 5 attempts to sit for the examination will be allowed, to be availed within 3 calendar years of the first attempt
- Re-admission in DCH course is not permissible under any circumstances
- The results will be announced according to the rules and regulations set by the Examination Branch of UHS Lahore

RECOMMENDED BOOKS

1. Paediatric Association. ***Textbook of Paediatrics of Pakistan*** (latest Edition).
2. Nelson. ***Essentials of Paediatrics*** (Latest Edition).
3. ***Current Paediatrics, Diagnosis and Treatment***. 6th Ed.
4. Lissauer T. and Clayden G. ***Illustrated Textbook of Paediatrics***. 2nd Ed.
5. Hull D. ***Hospital Paediatrics*** (Latest Edition)
6. Khan S. R. ***Hand Book of Clinical Paediatrics*** (Latest Edition).
7. Rana M. H., Ali S. Mustafa M. ***A Handnook of Behavioural Sciences for Medical and Dental Students***. Lahore: University of Health Science; 2007.
8. Fathalla M. F. and Fathalla M. M. F. ***A Practical Guide for Health Researcher***. Cairo: World Health Organization; 2004.

Reference Books

1. Nelson Textbook of Paediatrics. 17th Ed.
2. Forfar & Arneil's Textbook of Paediatrics. 6th Ed