附件2

**武汉大学全英文授课课程信息表**

**Wuhan University Course Outline**

**School/Department:Second Clinical College**

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| **Course Name (Chinese)\*** | 儿科学 |
| **Course Name (English)\*** | Pediatrics |
| **Course Code\*** | 1000009 |
| **Availability\*** | □Semester 1 □√Semester 2 |
| **Course Hours\*** | 84 |
| **Credits\*** | 4.5 |
| **Course Description\*** | The course includes systematic instructions in growth and development, nutritional needs of a child,  Immunization schedules and Pathophysiology diagnosis and management of common diseases of infancy and childhood. |
| **Course Objectives/Content\*** | The goals of the teaching of undergraduate students in Pediatrics are to acquire knowledge and appropriate skills for optimally dealing with major health problems of children and to ensure their optimal growth and development.  Contents:  **COURSE CONTENT**  **Growth and development**  · Normal growth from conception to maturity.  · Anthropometry – measurement and interpretation of weight, length/height, head circumference,  mid-arm circumference. Use of weighing machines, infantometer  · Interpretation of Growth Charts: Road to Health card and percentile growth curves.  · Abnormal growth patterns – failure to thrive, short stature.  · Growth pattern of different organ systems such as lymphoid, brain and sex organs.  · Normal pattern of teeth eruption.  · Principles of normal development  · Important milestones in infancy and early childhood in the areas of Gross Motor, Fine Motor,  Language and Personal–Social development. 3-4 milestones in each of the developmental fields, age  of normal appearance and the upper age of normal psychological and behavioral problems.  · Measurement and interpretation of sitting height, US: LS ratio and arm span.  · Age-independent anthropometric measurement-principles and application.  **Nutrition**  · Normal requirements of protein, carbohydrates, fats, minerals and vitamins for newborn, children  130 Syllabus MBBS — AIIMS  and pregnant and lactating mother. Common food sources.  · Breast feeding, physiology and lactation, composition of breast milk, Colostrum, Initiation and  technique of feeding. Exclusive breast milk. Hazards and demerits of prelacteal feed, top milk and  bottle-feeding. Feeding of LBW babies.  · Infant feeding/weaning foods, method of weaning.  · Assessment of nutritional status of a child based on history and physical examination.  · Protein energy malnutrition-Definition, classification according to IAP/Wellcome Trust, acute versus  chronic malnutrition. Clinical features of Marasmus & kwashiorkar. Causes and management of  PEM including that of complications planning a diet for PEM.  · Vitamins-Recognition of vitamin deficiencies (A, D, K, C, B Complex). Etiopathogenesis, clinical  feature, biochemical and radiological findings, differential diagnosis an management of nutritional  rickets & scurvy. Hypervitaminosis A and D.  · Characteristics of transitional and mature milk (foremilk & hind milk). Prevention and management  of lactation failure and feeding problems.  · Definition, causes and management of obesity.  **Immunization**  · National Immunization Programme.  · Principles of Immunization. Vaccine preservation and cold-chain.  · Types, contents, efficacy storage, dose, site, route, contra-indications and adverse reactions of  vaccines – BCG, DPT, OPV, Measles, MMR and Typhoid: Rationale and methodology of Pulse  Polio Immunization.  · Investigation and reporting of vaccine preventable diseases. AFP (Acute Flaccid Paralysis) surveillance  · Special vaccines like Hepatitis B, H influenza B, Pneumococcal, Hepatitis A, Chicken pox,  Meningococcal, and Rabies.  **Infectious diseases**  · Epidemiology, basic pathology, natural history, symptoms, signs, complications, investigations,  differential diagnosis, management and prevention of common bacterial, viral and parasitic infections  in the region, with special reference to vaccine-preventable disease: Diarrhea, LRTI, Tuberculosis,  Poliomyelitis, Meningitis, Diphtheria, Whooping cough, Tetanus including neonatal tetanus, Measles,  Mumps, Rubella, Typhoid, Viral Hepatitis, Cholera, Chickenpox, Giardiasis, Amoebiasis, Intestinal  helminthiasis, Malaria, Dengue fever, AIDS.  · Kala-Azar, Leprosy, Chlamydia infection  **Hematology**  · Causes of anemia in childhood. Classification based on etiology and morphology.  · Epidemiology, recognition, diagnosis, management and prevention of nutritional anemia-iron deficiency,  megaloblastic.  · Clinical approach to a child with anemia with lymphadenopathy and/or hepato-splenomegaly.  · Epidemiology, clinical features, investigations and management of Thalassemia.  · Approach to a bleeding child.  · Diagnosis of acute lymphoblastic leukemia and principles of treatment.  · Clinical features and management of hemophilia, ITP.  · Diagnosis and principles of management of lymphomas.  · Types, clinical features and management of acute hemolytic anemia.  · Non-thrombocytopenic purpura (Henoch-Schonlein purpura)  **Respiratory system**  · Clinical approach to a child with cyanosis, respiratory distress, wheezing. Significance of recession,  retraction.  · Etiopathogenesis, clinical features, complications, investigations, differential diagnosis and  management of acute upper respiratory infections, pneumonia with emphasis on bronchopneumonia,  bronchiolitis, bronchitis. Acute and chronic otitis media.  · Etiopathogenesis, clinical features, diagnosis, classification and management of bronchial asthma.  Treatment of acute severe asthma.  · Pulmonary tuberculosis-tuberculous infection versus tuberculous disease, difference between primary  and post-primary tuberculosis. Etiopathogenesis, diagnostic criteria in children versus adults.  Diagnostic aids-technique and interpretation of Mantoux test and BCG test. Radiological patterns,  Chemoprophylaxis and treatment.  · Diagnosis and management of foreign body aspiration. Differential diagnosis of stridor.  · Pathogenesis, clinical features and management of pneumothorax, pleural effusion and empyema.  · Multidrug resistant tuberculosis, Bronchiectasis, pulmonary cysts  **Gastro Intestinal Tract**  · Clinical approach to a child with jaundice, vomiting, abdominal pain, upper and lower GI bleeding,  hepato-splenomegaly.  · Acute diarrheal disease-Etiopathogenesis, Clinical differentiation of watery and invasive diarrhea,  complications of diarrheal illness. Assessment f dehydration, treatment at home and in hospital.  Fluid and electrolyte management. Oral rehydration, composition of ORS.  · Persistent and chronic diarrhea  · Clinical features and management of acute viral hepatitis and acute liver failure, causes & diagnosis  of Chronic Liver Disease.  · Neonatal cholestasis, portal hypertension  · Common causes of constipation.  · Abdominal tuberculosis.  · Causes, clinical features and management of Portal hypertension, Reye’s syndrome, Celiac disease.  · Drug induced hepatitis  **Central Nervous System**  · Evaluation of milestones and developmental age  · Localization of neurological deficit  · Clinical approach to a child with coma, mental retardation  · Common causes and approach to convulsion  · Clinical diagnosis, investigations and treatment of acute pyogenic meningitis, encephalitis & Tubercular  Meningitis, Cerebral Malaria  · Seizure Disorder-Causes and types of convulsions at different ages. Diagnosis categorization &  management of Epilepsy (Broad outline). Febrile convulsions-definition, types Management of seizures  and status epilepticus.  · Causes, diagnosis and management of cerebral palsy.  · Acute flaccid paralysis – Differentiation between Polio and Guillain – Barre syndrome.  · Microcephaly, Hydrocephalus, chorea  · Counseling parents for inherited neurological diseases  · Infantile tremor syndrome, infantile hemiplegia  **Cardiovascular system**  · Clinical features, diagnosis, investigation, treatment and prevention of acute rheumatic fever. Common  forms of rheumatic heart disease in childhood. Differentiation between rheumatic and rheumatoid  arthritis.  · Recognition of congenital acyanotic and cyanotic heart disease. Hemodynamics, clinical features  and management of VSD, PDA, ASD and Fallot’s tetralogy (Cyanotic spells).  · Recognition of congestive cardiac failure in children.  · Hypertension in children-recognition and referral.  · Diagnosis and management of bacterial endocarditis, pericardial effusion, myocarditis.  **Genito-Urinary system**  · Basic etiopathogenesis, clinical features, diagnosis, complications and management of acute poststreptococcal glomerulo-nephritis and nephrotic syndrome.  · Etiology, clinical feature, diagnosis and management of urinary tract infection – acute and recurrent.  · Etiology, diagnosis and principles of management of acute failure.  · Causes and diagnosis of obstructive uropathy in children.  · Diagnosis and principles of management of chronic renal failure.  · Causes and diagnosis of hematuria.  · Renal and bladder stones  · Hemolytic-uremic syndrome  **Endocrinology**  · Etiology clinical features & diagnosis of diabetes and hypothyroidism, hyperthyroidism and goiter in  children.  · Delayed and precocious puberty  **Neonatology**  · Definition – live birth, neonatal period, classification according to weight and gestation, mortality  rates.  · Delivery room management including neonatal resuscitation and temperature control  · Etiology, clinical features, principles of management and prevention of birth asphyxia.  · Birth injuries – causes and their recognition.  · Care of the normal newborn in the first week of life. Normal variations and clinical signs in the  neonate.  · Breast feeding-physiology and its clinical management  · Identification of congenital anomalies at birth with special reference to anorectal anomalies, tracheoesophageal fistula, diaphragmatic hernias, neural tube defects.  · Neonatal Jaundice: causes, diagnosis and principles of management.  · Neonatal infection– etiology, diagnosis, principles of management. Superficial infections, sepsis.  · Low birth weight babies-causes of prematurity and small-for-date baby, clinical features and  differentiation. Principles of feeding and temperature regulation. Problems of low birth weight  babies.  · Identification of sick newborn (i.e. detection of abnormal signs – cyanosis, jaundice, respiratory  distress, bleeding, seizures, refusal to feed, abdominal distension, failure to pass meconium and  urine)  · Recognition and management of specific neonatal problems-hypoglycemia, hypocalcemia, anemia,  seizures, necrotizing enterocolitis, hemorrhage  · Common intra-uterine infections  · Transportation of a sick neonate.  **Pediatrics Emergencies**  · Status epilepticus  · Status asthmaticus/Acute Severe Asthma  · Shock and anaphylaxis.  · Burns  · Hypertensive emergencies.  · Gastrointestinal bleed.  · Comatose child  · Congestive cardiac failure  · Acute renal failure  Fluid-Electrolyte  · Principles of fluid and electrolyte therapy in children  · Pathophysiology of acid-base imbalance and principle of management  **Genetics**  · Principles of inheritance and diagnosis of genetic disorders  · Down’s syndrome  **Behavioral Problems**  · Breath holding spells, nocturnal enuresis, temper tantrums, pica |
| **Teaching Methods** | Class lectures, tutorials, written assignments, power point presentations, Problem based vignettes, clinical case solving |
| **Assessment\*** | Written examination which includes Single best choice clinical questions, Short answers, Clinical case solution |
| **Textbook(s)** | 1. “Essentials of Pediatrics” by OP Ghai, Vinod K Paul and Piyush Gupta (latest edition)  2. “Care of the Newborn” by Meharban Singh (latest edition) |
| **Reading** | Students are encouraged to read extra books especially like these: “Nelson Textbook of Pediatrics” by Richard E. Behrman, Robert M. Kliegman, Waldo E. Nelson  and Victor C. Vaughan (latest edition)  2. “Rudolph’s Pediatrics” by Abraham M. Rudolph, Julien IE Hoffman, Colin D. Rudolph and Paul  Sagan (latest edition)  Clinical Methods  1. “Hutchison’s Clinical Methods” by M Swash (latest edition)  2. “Pediatrics Clinical Methods” by Meharban Singh (latest edition) |
| **Prerequisites** | Students must have sound knowledge of anatomy, embryology, physiology, pharmacology and pathology |
| **Lecturer(s)** |  |

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