The University of Jordan

الجامعة الاردنية

Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	
	Deans Council Approval Decision Number	265/2024/24/3/2
	The Date of the Deans Council Approval Decision	2024/1/23
	Number of Pages	06

1.	Course Title	**Pediatrics-2**
2.	Course Number	0529501
3.	Credit Hours (Theory, Practical)	**8 hours**
	Contact Hours (Theory, Practical)	**40 hours/week**
4.	Prerequisites/ Corequisites	Successfully passing Fifth year
5.	Program Title	**Doctor of Medicine**
6.	Program Code	**05**
7.	School/ Center	**School of Medicine**
8.	Department	**Pediatrics**
9.	Course Level	**Bachelor**
10.	Year of Study and Semester (s)	**Sixth year**
11.	Program Degree	**Bachelor**
12.	Other Department(s) Involved in Teaching the Course	**None**
13.	Learning Language	**English**
14.	Learning Types	☒Face to face learning ☐Blended ☐Fully online
15.	Online Platforms(s)	☒Moodle ☒Microsoft Teams
16	Issuing Date	**6/7/2022**
17.	Revision Date	**11-5-2025**

18. Course Coordinator:

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19. Other Instructors:

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20. Course Description:

A- Course Description:

An eight-week rotation. Rotating at the department of pediatrics as: Two weeks at the Jordan University hospital, rotating in the outpatient and emergency departments. Two weeks at The Royal Medical Services (Queen Rania Children's Hospital), Two weeks at the Ministry of Health sector (Al-Basheer Hospital). One week at King Hussain Cancer Center. One week at the pediatric service of private sector. In addition to the syllabus, lectures, seminars and skills acquired during the sixth year pediatric rotation, emphasis in this course will be on managing common pediatric health care issues in a problem solving environment, more specialized outpatient service and emergency department.

B- Aims:

1. Acquire knowledge of normal and abnormal growth and development,
2. Understand diagnosis and treatment of common pediatric diseases and emergency conditions in children.
3. Develop communication skills and understanding perspectives of children and their families.

21. Program Intended Learning Outcomes: (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)

PLO's	*National Qualifications Framework Descriptors*		
	Competency (C)	Skills (B)	Knowledge (A)
1.	☐	☐	■
2.	☐	■	☐
3.	■	☐	☐
4.	☐	☐	■
5.	☐	■	☐
6.	■	☐	☐
7.	☐	☐	■
8.	■	☐	☐

* Choose only one descriptor for each learning outcome of the program, whether knowledge, skill, or competency.

Program Intended Learning Outcomes:

1. **Demonstrate basic knowledge of normal human structure and function at molecular, genetic, cellular, tissue, organ, system and whole-body levels in terms of growth, development, and health maintenance. Analyze the basic molecular and cellular mechanisms involved in the causation and treatment of human disease and their influence on clinical presentation and therapy.**

2. **Collect, interpret, document, and communicate accurately a comprehensive medical history, including the psychological and behavioral factors, and a thorough organ-system-specific physical examination inclusive of the mental status of the patient.**

3. **Integrate and communicate collected clinical information in the construction of appropriate diagnostic and therapeutic management strategies to identify life-threatening conditions ensuring prompt therapy, referral, and consultation with relevant disciplines and skillfully perform basic medical procedures for general practice on patients with common illness, acute and chronic, taking into account environmental, social, cultural and psychological factors.**

4. **Demonstrate in-depth knowledge of the epidemiology and biostatistics of common diseases, and analyze the impact of ethnicity, culture, socioeconomic factors and other social factors on health, disease, and individual patient's health care.**

5. **Communicate effectively and professionally, both orally and in writing, with patients, their families, and with other healthcare providers utilizing information technology resources in his/her scholarly activities and professional development with the ability to teach others, and to understand and respect other healthcare professionals 'roles and apply the principles of multidisciplinary teamwork dynamics and collaboration.**

6. **Apply scientific methods including evidence –based approach to the medical practice including problem identification, data collection, hypothesis formulation, etc., and apply inductive reasoning to problem solving and ensure that clinical reasoning and decision making are guided by sound ethical principles.**

7. **Demonstrate knowledge of scientific research methods and ethical principles of clinical research and be able to write research proposals or research papers.**

8. **Demonstrate professionally the skills needed for Quality improvement, lifelong learning, and continuous medical education including the ability to identify and address personal strength and weakness, self-assess knowledge and performance, and develop a self-improvement plan.**

22. Course Intended Learning Outcomes: (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

Course ILOs #	The learning levels to be achieved						Competencies
	Remember	Understand	Apply	Analyse	Evaluate	Create	
1.	✓	✓					Review the anatomy and pathophysiology of Prematurity, Transition from intrauterine to extra uterine physiology, respiratory, cardiovascular, gastrointestinal, renal, endocrine, hematology, Neurology systems.
2.		✓	✓	✓	✓	✓	Collect relevant clinical information and perform comprehensive History Taking and Medical Exam.
3.		✓	✓	✓	✓	✓	Interpret relevant functional tests in each discipline.
4.		✓	✓	✓	✓	✓	Interpret common findings on different imaging modalities for each system.
5.		✓	✓	✓	✓	✓	Demonstrate the ability to analyze collected data and formulate a management plan.

6.		✓	✓	✓	✓	✓	Emphasize the concept of primary prevention including monitoring growth and development, Nutrition and vaccinations.
7.		✓	✓	✓	✓	✓	Ensure that the student exhibit the highest standards of professional attitude towards patients, colleages and supervisors.

23. The matrix linking the intended learning outcomes of the course -CLO's with the intended learning outcomes of the program -PLOs:

Program ILOs / ILOs of the course	CLO (1)	CLO (2)	CLO (3)	CLO (4)	CLO (5)	CLO (6)	CLO (7)
PLO (1)	✓						
PLO (2)		✓					
PLO (3)			✓	✓			
PLO (4)						✓	
PLO (5)							✓
PLO (6)					✓		
PLO (7)							
PLO (8)							

***Linking each course learning outcome (CLO) to only one program outcome (PLO) as specified in the course matrix.**

****Descriptors are determined according to the program learning outcome (PLO) that was chosen and according to what was specified in the program learning outcomes matrix in clause (21).**

24. Topic Outline and Schedule:

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
1	**Growth Development and Nutrition**	1.1 Review the physiology and pathophysiology of normal and abnormal growth and development. 1.2 Perform Growth assessment using growth charts, 1.3 Developmental Assessment and Screening, and developmental milestone. 1.4Nutrition of infants, breast feeding and transition of food 1.5 Childhood development is often categorized into 4 domains (social, fine motor, gross motor and language) and screening questions in each domain should be explored (see Denver developmental screening chart. In older children, make sure to ask about their hobbies, activities, school and friends. Assess academic achievement from parents/patient 1.6 Description of diet. Particularly important in the first year of life or if growth is abnormal. Comment whether breast feeding or formula feeding (and what type of formula and how much) in infants. Ask about typical diet in older children or about concerns the parents may have. Particularly for children with problems with growth, or obesity, student is expected to be able to describe the diet as cc/Kg/day, and Kcal/kg/day	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lecture	Evaluation/ attendance and discipline End of rotation OSCE End of year written exam
1	**Neonatology and Newborn Examination**	2.1 Prematurity 2.2 Breast feeding and infant nutrition. 2.3 Thermoregulation in the premature and term infant 2.4. Jaundice 2.5 Neonatal Respiratory Distress 2.6 Neonatal Sepsis Detailed Description Preterm baby Student should recognize preterm baby and should understanding of the following: Prevention: Know the pulmonary and non-pulmonary effects on the fetus and/or newborn infant of maternally administered steroids (including betamethasone, dexamethasone, and prednisone) and role of antibiotic use in prolonged rupture of	Face to face Morning educational rounds Daily Activities History taking and	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		membranes Risk Factors of preterm labor Causes of preterm delivery Delivery room management of preterm baby Complications and its management including (apnea of prematurity, intraventricular hermitage, patent ductus arteriosus, hypothermia, bronchopulmonary dysplasia, osteopenia of prematurity, retinopathy of prematurity, anemia of prematurity, necrotizing enterocolitis Prognosis and outcome Thermal regulation Know General principles of Neutral thermal environment and normal skin temperature in new born through being familiar with the incubators and warmers Jaundice Student should recognizes Jaundiced newborn and show understanding of: • Bilirubin physiology, including pathways of synthesis, transport, and metabolism, in the newborn • Differences between physiologic and nonphysiologic jaundice • How to use a pre-discharge bilirubin measurement to predict the risk of severe hyperbilirubinemia • Bilirubin toxicity and pathologic hyperbilirubinemia • Correlation between human milk and jaundice Respiratory distress in newborn Student should recognize Respiratory distress and to show understanding of • Common Causes (transient tachypnea of newborn, respiratory distress syndrome, meconium aspiration syndrome, pneumonias, persistent pulmonary hypertension) • Less common problems (diaphragmatic hernia, pneumothorax, airway obstruction such as choanal atresia) • General concepts on types of respiratory Support • Treatment options of common respiratory problems (i.e surfactant) Neonatal sepsis and meningitis Student should recognize newborn with suspected sepsis and should show understanding of: • Mode of transmission of infectious agents to the neonate • Clinical manifestations, laboratory features, and differential diagnosis of neonatal sepsis • Treatment and complications of sepsis • Infectious agents that cause neonatal sepsis • Maternal, perinatal, and neonatal risk factors for neonatal sepsis • Normal CSF counts and chemistries in preterm and term neonates and changes with Central nervous system	physical examination. Crash Course Lecture	

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		infection Laboratory findings in newborn including CBC, CSF, urinalysis, electrolytes Student should be able to interrupt these findings. Hypoxic ischemic encephalopathy Student should show understanding of • Causes, clinical features, evaluation, and management of hypoxic ischemic encephalopathy • Outcome of infants with hypoxic-ischemic encephalopathy Fluid and total parental fluid management newborn Students should recognize normal fluid need in new born. Effect of certain common Acute and chronic Maternal Illnesses on newborn Students should show understanding of certain maternal illnesses on the fetus and newborn, such as maternal chronic hypertension and preeclampsia, maternal diabetes mellitus (including gestational diabetes) Large- and small-for-gestational age (LGA - SGA) infants Students should show understanding of • Postnatal growth patterns of SGA infants • Recognize the effects of fetal programming and nutrition on the prevalence and types of adult-onset disorders • Definitions, causes, clinical features, differential diagnosis, and typical laboratory findings of SGA and LGA infants Vitamins and Electrolytes To know the requirements for vitamins D in newborn infants, To know the changing requirements of sodium, potassium, in the term neonate Human milk • To know the differences between the composition of breast milk of the mother of a preterm infant and that of a full-term infant. • To know the differences in the nutritional composition of human milk and infant formula • To know the immunologic and anti-infective constituents in human milk and their physiologic effects • To know that human milk needs to be fortified in order to meet the nutritional needs of preterm infants • To realize common problems associated with breast milk production in the NICU, and their management • To know the advantages and disadvantages of the use of human milk • To become aware of WHO recommendation for baby friendly hospital initiative Thyroid screening of the newborn To know the interpretation and trimming of thyroid screening tests in the		

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		diagnosis of thyroid dysfunction Professional conduct and attitudes Communication skills Introduction to verbal and nonverbal communication, secrecy, building rapport, and to be aware of the skill of breaking bad news.		
2	**Neurology**	3.1 Normal development and developmental delay 3.2 approach to hypotonia 3.3 Approach to Seizures 3.4 Autism and attention deficit disorders History, and a detailed neurological examination The student will learn to elicit a complete history, perform a detailed neurological examination, and formulate a differential diagnosis and management plan for each patient. Students the know the diagnostic work-up and ongoing care of patients with a broad variety of disorders of the nervous system. student should have the opportunity to investigate the more seriously ill or complicated patients and to learn about neuro - diagnostic procedures such as electroencephalography (EEG), evoked potentials, CT scan and MRI. Seizures disorders Classification, diagnosis and management and diagnostic tools if available mental retardation, learning disabilities Understand the differential diagnosis and evaluation. Understand the management. Understand the clinical manifestations their prognosis. Headache Classification provenance, etiology, treatment and prognosis of common types of headache in children (e.g migraine, and tension) Autism Definition, and new developments of autism, treatment and behavioral modification, as well as prognosis ADHD Diagnosis, treatment, and prognosis Neuromuscular Disorders: Signs and symptoms of each disorder (myopathy, neuromuscular junction, peripheral neuropathy and anterior horn cell disorder). The student should be able to differentiate between central and peripheral hypotonia, and to understand the diagnostic approach for hypotonic children. Development The students should know normal and abnormal patterns of development. After reviewing the "normal" development process through the infant, pre-school, and school-age years, Abnormal Development . Students should participate in the	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lecture	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		pediatric evaluation of young children with suspected delays in cognitive, language, social and/or motor development. Students should learn how to assess signs of developmental delay and/or neuromotor impairment. Students should learn with the learning and attention problems experienced by some school-aged children. Students should participate in the developmental pediatric evaluation of both inpatients and outpatients of various ages. The student will learn the role of various essential non-medical disciplines (psychology, speech/language therapy, occupational therapy, physical therapy). Students will be expected to give a short presentation on a related topic of interest. Behavioral problems the student will learn common problem behavioral problems including Temper tantrum, Bulimia, Anorexia nervosa,		
3	**Respiratory system**	4.1 Review the anatomy and pathophysiology of respiratory system. 4.2 Interpret pulmonary function tests and arterial blood gases. 4.3 Interpret common findings on Chest x-ray 4.4 Approach and outline the management for patients with upper and lower respiratory tract infections, wheezing, respiratory distress and failure, cystic fibrosis 4.5 Management of Asthma Common pulmonary disorders in the in-patient and outpatient settings. The student should take a complete history and performing a pertinent physical examination to differentiate the normal child from one with respiratory distress and disease student should be able to formulate a differential diagnosis and management plan for children with acute and chronic respiratory disorders. Student should learn the indications, limitations, and interpretation of laboratory techniques used to assess the child with breathing problems such as radiographs, CT scans, pulmonary function tests, flexible bronchoscopy, bronchoalveolar lavage, and sweat tests. During the rotation, the student will become familiar with pharmacological agents and mechanical techniques used to treat acute and chronic respiratory disease. Asthma Students will be able to categorize asthma severity based on the symptoms, formulate a plan of care and follow up. Cystic Fibrosis and other chronic lung disease	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lecture	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		Students will become familiar with the presentation of cystic fibrosis, know the differential diagnosis, workup, and general plan of management. Primary and secondary immunodeficiency, the student will acquire skills in history taking, complete physical examinations and diagnoses of common and rheumatology childhood immunology and allergic diseases. The student will show understanding of the differential diagnosis, laboratory work-up and evaluation of patients with recurrent infections, recurrent fever or unknown systemic disease. The student will learn and understand the basic clinical concepts of cell mediated and humoral immunity and mechanism of host defense. Learn basic immunologic lab tests including NBT, and quantitative immunoglobulins.		

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
4	**Cardiology**	5.1 Review the anatomy and physiology of cardiovascular system. 5.2 Comprehend symptoms and signs of cardiovascular conditions. 5.3 Interpret basic electrocardiogram for common cardiac conditions. 5.4 Approach and outline the management for patients with congenital heart disease (cyanotic and acyanotic), 5.5 Arrhythmias 5.6 Cardiomyopathies and Congestive Heart Failure 5.7 Acquired Heart Disease Clinical cardiac evaluation and cardiac function assessment the student is expected to become knowledgeable of the clinical parameters to assess cardiac function in children by physical examination. The student is expected to become knowledgeable in analyzing abnormal findings on physical examination such as the presence of murmurs, abnormal pulses, heaves and thrills, and other added sounds on cardiac auscultation. Fetal circulation and congenital heart disease The student is expected to show an understanding of fetal circulation and the changes that occur in transition to post-natal circulation. The student is expected to become knowledgeable of signs and symptoms of common cyanotic and non-cyanotic congenital heart disease, and the different ways of presentations. Common congenital heart diseases include VSD, ASD, PDA, TOF, TGA, Coarctation of aorta, aortic and pulmonary stenosis. The student is expected to know basic management options for congenital heart disease. Acquired heart disease in childhood. The student is expected to become knowledgeable of the common acquired heart disease in children, namely Kawasaki disease, rheumatic heart disease, myocarditis and endocarditis, as well as the common cardiomyopathies. Rhythm issues the student is expected to become knowledgeable in the basic interpretation of ECG, and to be familiar with the presentation of common pediatric arrhythmias, such as supraventricular tachycardia and atrioventricular block	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
5	**Gastroenterology**	6.1 Review the anatomy and physiology of gastro-intestinal system. 6.2 Comprehend symptoms and signs of gastro-intestinal conditions. 6.3 Interpret liver function tests. 6.4 Approach and outline the management for patients with failure to thrive, acute gastroenteritis, gastroesophageal reflux, Jaundice, , Inflammatory bowel disease, Chronic diarrhea, Malabsorption syndrome, celiac disease, and constipation. 6.5 Approach to Liver Disease Growth Normal growth pattern of infants and children. Failure to thrive: types, etiology, and management. Malnutrition and obesity. Nutrition Infant and toddler nutrition. Composition of breast milk Infant/ toddlers formulas; regular and special formulas. Nutritional rehabilitation. Refeeding syndrome. Vitamin deficiencies: causes, manifestations, and treatment. Eating disorders: anorexia and bulimia. Pediatric Liver disease Cholestasis in infancy: etiology, investigations, and management. Chronic liver disease in children: causes, assessment, and treatment. Acute liver failure. Hepatitis A and B in pediatrics. Wilson disease. NASH. Autoimmune hepatitis. Gastro esophageal reflux and GERD Definition, natural history, investigations, and management (infancy and adolescence). Abdominal pain Causes of abdominal pain: acute VS chronic / recurrent, with investigation and management. Functional abdominal pain: diagnosis and management. Helicobacter pylori: diagnosis and treatment. GI bleeding Upper GI bleeding: etiology according to age groups, investigations, and management. Lower GI bleeding: etiology according to age groups, investigations, and management. Diarrhea Acute diarrhea: definition, etiology, investigations, and management. Chronic diarrhea: definition, etiology, investigations, and management. Constipation Diagnosis and management Malabsorption Diagnosis and management	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

6	**Nephrology**	7.1 Review the anatomy and physiology of the renal system. 7.2 Comprehend the symptoms and signs of renal conditions. 7.3 Interpret urine analysis for common renal conditions. 7.5 Interpret acid base and electrolytes disturbances. 7.6 recognition and management of dehydration and electrolyte disturbances 7.7 Approach and outline the management for patients with Proteinuria, Hematuria, Glomerulonephritis, nephrotic syndrome, Urinary tract infections, Acute renal failure, Chronic renal failure. 7.8 Approach to Urinary Tract Infections 7.9 Approach to Acute Kidney Injury History and physical examination of renal patients, the student will become knowledgeable in the presentation and examination of a child with renal disease. The student should know how to work-up patients with renal diseases and interpret the findings and do the differential diagnosis and reach the correct diagnosis. The student should participate in all the clinical activities of the division including the care of hospitalized, ambulatory patients, and consultations. Evaluation of kidney function Should know the normal urinalysis. Should know updated Schwartz formula to calculate eGFR, and stages of CKD. Should know normal creatinine, urea, electrolytes for age. Should clinically differentiate tubular from glomerular disease. Should clinically differentiate acute from chronic renal failure. Acid base problems Student should interpret acid base, blood gas, and recognize variable causes of imbalance. Fluid and electrolyte management Student should know how to calculate fluid in normal and dehydrated children and manage electrolytes imbalance especially sodium and potassium imbalance. Proteinuria and Nephrotic syndrome Should know the etiologies, clinical presentation, laboratory evaluation management, outcome and complications of nephrotic syndrome including minimal change disease and Focal segmental glomerulosclerosis and should know the types of proteinuria and how to calculate protein/creatinine ratio Hematuria and glomerulonephritis Should be able to define hematuria, differentiate glomerular from non glomerular causes of hematuria. The student should know the work up and differential diagnosis of hematuria. He should know presentation and management of common diseases of glomerular hematuria as post streptococcal GN, HSP, HUS,Alport,IgA nephropathy Urinary Tract Infection Should know symptoms and signs of UTI, diagnostic investigations,management,complications, and indications for imaging .He should know risk factors for recurrent UTI as vesicoureteral reflux and others. Hypertension in children Measurement of BP, definition of hypertension, Etiology of hypertension; clinical findings; lab evaluation; differential dx of secondary hypertension; management	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		Renal Tubular Disorders Clinical diagnosis and lab evaluation of metabolic acidosis and alkalosis. Should know how to differentiate and manage various types of RTA (Type I RTA, Type II RTA, Type IV RTA.) Should know how to calculate serum anion gap; urine anion gap. Acute and chronic renal failure Etiologies, clinical presentation, complications of acute and chronic renal failure. Causes of Acute Kidney Injury in children (should be able to differentiate prerenal from intrinsic renal, and postrenal. Management of acute and chronic kidney disease. Voiding disorders Know and differentiate nocturnal enuresis from overactive bladder, management of both. Additional for Jordan Cultural competency in pediatric nephrology The various manifestations of crystalluria		
7	**Hematology and Oncology**	8.1 Review the physiology of the hematopoietic and coagulation systems. 8.2 Comprehend symptoms and signs of hematological conditions. 8.3 Interpret blood films for common hematological conditions. 8.4 Interpret coagulation and clotting disturbances 8.5 Approach to patients with anemia including: Iron deficiency anemia. 8.6 Approach to patients with Bleeding disorders, Platelets disorders, Hemophilia, Thrombophilia and other bleeding disorders. 8.7 Approach to patients with Acute leukemia, Lymphomas, Wilms tumor, neuroblastoma. 8.8 Approach to Brain Tumors History taking The student will acquire skills in history taking and physical examination in children with a wide variety of hematologic and oncologic diseases Data gathering The student should know the work-up of hematologic patients and planning their investigations and treatment Data interpretation Student should be able to do interpretation of basic hematologic and biochemical tests (complete blood count, blood smear, coagulation studies, hemoglobin electrophoresis, Coombs test) Anemia Know the clinical and laboratory features of common pediatric anemias, including iron deficiency, hemoglobinopathies, including the thalassemias and other hemolytic anemias Bleeding disorders Should know common causes of bleeding tendencies including idiopathic thrombocytopenic purpra , hemophilia, and other disorders Oncology Know the clinical and laboratory features	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		of leukemia and lymphoma, its classification, and basic approach to management. Know the clinical and laboratory features of common solid tumors in children (eg, Wilms tumor, neuroblastoma, , brain tumors, rhabdomyosarcoma, bone tumors and histiocytosis)		
7	**Endocrinology**	9.1 Define the pathophysiology of Diabetes Mellitus. 9.2 Diagnose and treat patients with Diabetes Mellitus. 9.3 Prevent and recognize complications of Diabetes Mellitus. 9.4 Approach and outline the management of patients with common endocrine diseases such as congenital adrenal hyperplasia, adrenal insufficiency, hypothyroidism, rickets and calcium disorders, normal and abnormal puberty, short stature, hypoglycemia, and ambiguous genitalia. Growth Normal growth pattern of infants and children. Growth charts. Causes, diagnostic approach and management of short stature. Puberty Normal physiology of puberty. Etiologies, clinical manifestations, diagnosis, management and follow up for patients with precocious and delayed puberty. Adrenal disorders Clinical manifestation, diagnosis and management of adrenal insufficiency(mainly congenital adrenal hyperplasia, Addison's Disease, central adrenal insufficiency). Management of adrenal crisis. Hypopituitarism Clinical manifestations of pituitary hormone deficiencies, causes, laboratory and radiological work up. Medical and surgical management. Diabetes Classification, pathogenesis, clinical manifestation, diagnosis, management, complications. Hypoglycemia Causes, clinical manifestation, management. Thyroid disorders Etiologies, clinical manifestations, diagnosis and management of congenital hypothyroidism. Pathophysiology, clinical manifestation, management and follow up of autoimmune thyroiditis. Ambiguous genitalia Classification of XX and XY ambiguous genitalia. Approach for diagnosis and management. Counseling for parents of children with	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
		ambiguous gentalia. Rickets Normal bone formation and calcium homeostasis. Types of rickets (mainly: vit D deficient, resistant and dependent rickets). Diagnostic approach (biochemical and radiological) and management. Calcium balance disorders Normal calcium homeostasis. Causes, clinical manifestations, diagnosis and management of hypocalcemia and hypercalcemia in infants and children. Water and Sodium balance disorders Normal sodium homeostasis. Causes, clinical manifestations, diagnosis and management of hyponatremia (mainly SIADH, hypoaldosteronism, pseudo hypoaldosteronism), and hypernatremia (mainly diabetes insipidus, cerebral salt-wasting) in infants and children.		

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
8	**Infectious Diseases**	10.1 Review the basic concepts about viral, bacterial, and fungal pathogens. 10.2 Identify the principles of antibiotic therapy and Antibiotic resistance. 10.3 Specify the principles of infection control. 10.4 Approach and outline the management of patients with Sepsis. 10.5 Fever and fever of unknown origin. 10.6 Meningitis 10.7 urinary tract infections 10.8 upper and lower respiratory tract infections 10.9 Gastroenteritis 10.10 vaccines Ask about receipt of immunizations in every patient; there are standard immunizations given at specific ages. Parents sometimes have the immunization record; If the child has not received immunizations, delicately explore the reasons why. Saying "up to date" is not an appropriate response, try to document what immunizations were given and when Respiratory infections students should be able to Know the clinical presentation, etiologic agents, diagnostic studies and management of patients with serious bacterial and viral infections. Students should learn the antimicrobial spectrum of activity, indications for usage and adverse effects of commonly used antibiotics; to interpret antibiotic susceptibility data provided by the Microbiology Laboratory. common, serious infections such as meningitis and osteomyelitis Gastroenteritis fever of unknown origin common infections, and infections in children with impaired host defenses Immunization The student should become aware of the immunization schedule given to children, including mechanism of action, side effects, and timing of each vaccine. Additional optional vaccines will also be studied. Acute exanthema Common infectious causes of skin rash diagnosis and differential diagnosis	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
8	**Metabolic Diseases**	11.1 Inborn Errors of Metabolism General Genetics • Appreciate the role of genetics in childhood health care and the practice of pediatrics. • Understand the fundamentals of molecular genetics and the human genome relative to genetic testing and counselling • Know the classification of Genetic disorders • Know the patterns of inheritance and be able to obtain an informative family history • Know the genetic basis of common disorders Cytogenetics • Understand the fundamentals of human cytogenetics • Know the classification of human chromosomal abnormalities • Know the clinical picture and care for children with numerical autosomal abnormalities [Trisomies 21, 18, and 13] • Know the clinical picture and care of children with sex chromosome abnormalities • Understand the role of copy number variants (CNVs) in human genetic disorders Inborn errors of metabolism • Understand the common characteristics, clinical manifestations and treatment options for genetic metabolic disorders, as well as the role of massive newborn screening in early detection. • Know the biochemical and genetic basis of the defects in the metabolism of amino acids • Know biochemical and genetic basis of the defects in the metabolism of lipids • Know the biochemical and genetic basis of the defects in the metabolism of carbohydrates • Know the biochemical and genetic basis of the defects in the metabolism of purines and pyrimidines • Know the biochemical and genetic basis of the mucopolysaccharidoses Clinical genetics and dysmorphology • Understand the embryologic and genetic basis of the congenital anomalies (birth defects) and their classification • Know the genetic basis, clinical picture and care of children with common neurocutaneous syndromes • Know the genetic basis, clinical picture and care of children with common skeletal dysplasias • Know the genetic basis, clinical picture and care of children with congenital cardiac anomalies	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

Week	Topic	Course learning Objectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
8	**Pediatric Critical Care**	12.1 Poisonings Students should know when to suspect ingestions (accidental and intentional). General support for the poisoned child and specific diagnostic and therapeutic measures including antidotes when available. We will concentrate on common agents such as Paracetamol, Salicylic Acid, Iron, drugs of abuse (Opiates, Benzodiazepines etc), anticonvulsants, and antihypertensive agents. Respiratory Distress and Failure Student should know presentation, method of Clinical diagnosis& monitoring of a child in respiratory distress, interpretation of blood gases, Modes of invasive and non-invasive respiratory support for hypoxic and or hypercarbic respiratory failure. Differential diagnosis for cause of hypoxia and hypercarbia. Shock Student should know Types of shock, signs and symptoms of shock, initial management and stabilization of a child in shock. Monitoring of the child in shock and concept of end organ function monitoring Airway management Bag mask ventilation, intubation, adjunct airway devices, non-invasive respiratory support(this part is taught in the simulation lab) General Support of the critically ill child Nutritional support, fluid & electrolyte balance, pain management and sedation.	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam
8	**Child Abuse and Neglect**	13.1 Risk factors for child Abuse. Student should know the risk factors for child Abuse. Types of child injuries due to Abuse Student should Know how to suspect child Abuse base on type of injury. Child abuse reporting Student should Know the Jordanian system to report and identify affected children	Face to face Morning educational rounds Daily Activities History taking and physical examination. Crash Course Lectures	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

25. Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Descriptors **	Period (Week)	Platform
Evaluation/ Attendance and Discipline	20	**Growth Development and Nutrition**	1.1/1.2/1.3/1.4	K S C	Week 1 to Week 8	Seminar rooms Outpatient clinics at Jordan University Hospital, Royal Medical Services Ministry of Health, King Hussain Cancer Center Private Sector
		Neonatology	2.1/2.2/2.3/2.4/2.5/2.6		Week 1 to Week 8	
		Neurology	3.1/3.2/3.3/3.4		Week 1 to Week 8	
		Respiratory	4.1/4.2/4.3/4.4/4.5		Week 1 to Week 8	
		Cardiology	5.1/5.2/5.3/5.4/5.5/5.6/ 5.6/5.7		Week 1 to Week 8	
		Gastroenterology	6.1/6.2/6.3/6.4		Week 1 to Week 8	
		Nephrology	7.1/7.2/7.3/7.4/7.5/7.6/ 7.7/7.8/7.9		Week 1 to Week 8	
		Hematology and Oncology	8.1/8.2/8.3/8.4/8.5/8.6. 8.7/8.8		Week 1 to Week 8	
		Endocrinology	9.1/9.2/9.3/9.4		Week 1 to Week 8	
		Infectious Diseases	10.1/10.2/10.3/10.4/10 .5/10.6/10.7/10.8/10.9/ 10.10		Week 1 to Week 8	
		Metabolic Diseases	11.1		Week 1 to Week 8	
		Pediatric Critical Care	12.1		Week 1 to Week 8	
		Child Abuse and Neglect	13.1		Week 1 to Week 8	
End of rotation OSCE	**20**	Growth Development and Nutrition Neonatology Neurology Respiratory Cardiology Gastroenterology Nephrology Hematology and Oncology Endocrinology Infectious Diseases Metabolic Diseases	1.1/1.2/1.3/1.4 2.1/2.2/2.3/2.4/2.5/2.6 3.1/3.2/3.3/3.4 4.1/4.2/4.3/4.4/4.5 5.1/5.2/5.3/5.4/5.5/5.6/5.6/5. 7 6.1/6.2/6.3/6.4 7.1/7.2/7.3/7.4/7.5/7.6/7.7/7. 8/7.9 8.1/8.2/8.3/8.4/8.5/8.6.8.7/8. 8 9.1/9.2/9.3/9.4 10.1/10.2/10.3/10.4/10.5/10. 6/10.7/10.8/10.9/10.10 11.1	**K S C**	End of 8th week	Jordan University Hospital
End of year OSCE	**10**	Growth Development and Nutrition Neonatology Neurology Respiratory Cardiology Gastroenterology	1.1/1.2/1.3/1.4 2.1/2.2/2.3/2.4/2.5/2.6 3.1/3.2/3.3/3.4 4.1/4.2/4.3/4.4/4.5 5.1/5.2/5.3/5.4/5.5/5.6/5.6/5. 7 6.1/6.2/6.3/6.4	**K S C**	End of academic year (June of each year)	Jordan University Hospital

		Nephrology Hematology and Oncology Endocrinology Infectious Diseases Metabolic Diseases	7.1/7.2/7.3/7.4/7.5/7.6/7.7/7.8/7.9 8.1/8.2/8.3/8.4/8.5/8.6.8.7/8.8 9.1/9.2/9.3/9.4 10.1/10.2/10.3/10.4/10.5/10.6/10.7/10.8/10.9/10.10 11.1			
End of year Oral exam	**10**	Growth Development and Nutrition Neonatology Neurology Respiratory Cardiology Gastroenterology Nephrology Hematology and Oncology Endocrinology Infectious Diseases Metabolic Diseases	1.1/1.2/1.3/1.4 2.1/2.2/2.3/2.4/2.5/2.6 3.1/3.2/3.3/3.4 4.1/4.2/4.3/4.4/4.5 5.1/5.2/5.3/5.4/5.5/5.6/5.6/5.7 6.1/6.2/6.3/6.4 7.1/7.2/7.3/7.4/7.5/7.6/7.7/7.8/7.9 8.1/8.2/8.3/8.4/8.5/8.6.8.7/8.8 9.1/9.2/9.3/9.4 10.1/10.2/10.3/10.4/10.5/10.6/10.7/10.8/10.9/10.10 11.1	**K S C**	End of academic year (June of each year)	Jordan University Hospital
Final Written Examination	**40**	Growth Development and Nutrition Neonatology Neurology Respiratory Cardiology Gastroenterology Nephrology Hematology and Oncology Endocrinology Infectious Diseases Metabolic Diseases	1.1/1.2/1.3/1.4 2.1/2.2/2.3/2.4/2.5/2.6 3.1/3.2/3.3/3.4 4.1/4.2/4.3/4.4/4.5 5.1/5.2/5.3/5.4/5.5/5.6/5.6/5.7 6.1/6.2/6.3/6.4 7.1/7.2/7.3/7.4/7.5/7.6/7.7/7.8/7.9 8.1/8.2/8.3/8.4/8.5/8.6.8.7/8.8 9.1/9.2/9.3/9.4 10.1/10.2/10.3/10.4/10.5/10.6/10.7/10.8/10.9/10.10 11.1	**K S C**	End of academic year (June of each year)	Exam Builder
** K: Knowledge, S: Skills, C: Competency						

*** According to the instructions for granting a Bachelor's degree.**

****According to the principles of organizing semester work, tests, examinations, and grades for the bachelor's degree.**

Final exam specifications table

(This Table is completed on a separate form by course coordinators prior to conduction of each exam according to Accreditation and Quality Assurance Centre procedures and forms)

No. of questions/ cognitive level						No. of questions per CLO	Total exam mark	Total no. of questions	CLO Weight	CLO no.
Create %10	Evaluate %10	analyse %10	Apply %20	Understand %20	Remember %30					
										1
										2
										3
										4
										5

26. Course Requirements:

- ✓ **Seminar rooms**
- ✓ **Outpatient clinics**
- ✓ **Inpatient hospital**
- ✓ **Internet connection**
- ✓ **Online educational material using Moodle or Zoom (Electronic Videos and Activities)**
- ✓ **A simulated clinical environment for OSCE (Real or Simulated Patients)**

Teaching Methods and Assignments:

Development of CLOs is promoted through the following teaching and learning methods:

- ✓ **Morning educational rounds**
- ✓ **Seminars and case discussions.**
- ✓ **History taking and physical examinations.**
- ✓ **Bedside clinical teaching rounds.**
- ✓ **Discussion sessions and forums**
- ✓ **Crash Course Lectures**
- ✓ **Teaching clinics.**
- ✓ **Emergency department**

27. Course Policies:

A- Attendance policies:

Attendance will be monitored by the course coordinator.

Attendance policies will be announced at the beginning of the course.

B- Absences from exams and handing in assignments on time:

Will be managed according to the University of Jordan regulations.

Refer to http://registration.ju.edu.jo/Documents/daleel.pdf

C- Health and safety procedures:

Faculty Members and students must always, conform to Health and Safety rules and procedures.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this course and integrity in your behavior in and out of the classroom.

Students who violate this policy will be subjected to disciplinary action according to University of Jordan disciplinary policies

E- Grading policy:

Grade-point average, Rules are preset by the Faculty and Department Councils

F- **Available university services that support achievement in the course:**

Availability of comfortable lecture halls, data show, internet service and E learning website https://elearning.ju.edu.jo/ .

28. References:

A- Required book (s), assigned reading and audio-visuals:
Nelson Textbook of Pediatrics, 21st edition, by R. Kliegman et al.

B- Recommended books, materials, and media:
1. Nelson Essentials of Pediatrics, by K Markdante.
2. Zitelli Atlas of Pediatric Physical Diagnosis.

3. Harriet Lane Handbook of Pediatrics.
4. Smith's Recognizable Patterns of Human Malformations.
5. Online modules in pediatric GI (created by Indiana University).
http://radtf.indyrad.iupui.edu/radtf Username: mfeist Password: student
6. Online modules in pediatric Hematology Oncology (St Jude s Children s Hospital Lectures)

C- Further Recommended books, materials, and media:

Medical library: textbooks, journals, periodicals/ Web based resources:

1. https://www.uptodate.com/
2. MEDLINE Home (nih.gov)

PubMed (nih.gov)

29. Additional information:

Pediatric Dep. # Medicine
University of Jordan
Date: 9/7/25

Name of the Instructor or the Course Coordinator: Dr. Laila Tutunji	Signature:	Date: .....
Name of the Head of Quality Assurance Committee/ Department Dr Enas Al-Zayadneh.	Signature:	Date: 10/7/2025
Name of the Head of Department Professor Abeer Assaf	Signature:	Date: .....
Name of the Head of Quality Assurance Committee/ School or Center Professor Ayman Wahbeh.	Signature:	Date: 10/7/2025
Name of the Dean or the Director Professor Ayman Wahbeh.	Signature:	Date: 10/7/2025

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