

Jordan University of Science and Technology

Faculty of Medicine 2018-2019

COURSE TITLE : Pediatrics I

COURSE CODE : MED 507

CREDIT HOURS : 10.5 CREDIT HOURS

SEQUENCE : 4th year, 9 WEEKS

COURSE COORDINATOR: Dr. Rola Saqan

CONTACT: rssaqan@just.edu.jo

Course Description:

- 4th year medical students spend 9 weeks during this course at KAUH and the periphery hospitals including governmental and military teaching hospitals. During this 9-week rotation, students are directly supervised by clinical instructors who are pediatricians and subspecialists in pediatrics.
- This course gives 4th year medical students competences relevant to medical history taking of common pediatric disorders. Skills related to performing physical examination on infant and children are also emphasized.
- Most of the students' time will be in the inpatient settings, taking full history and performing full physical exam are done daily by students. After that, rounds and discussion of the cases taken by the students will be covered by the instructors.
- Students are supposed to write their notes (history and physical examination) and documenting that in their notebooks which might be reviewed by the instructors.
- Students attend daily morning reports, and daily rounds. One day per week, students devote their full time on attending lectures by the pediatricians at KAUH, where no clinical duties done on that day.
- Most of the learning process will be focused on how to perform full history and physical examination on pediatric patients. Differential diagnosis and case management will be also discussed to a lesser degree.
- Cases are diverse, from the simplest, most common and straight forward clinical cases, to the most complicated and serious cases managed in the inpatient settings.
- Small percentage of the students' time will be in the outpatients setting (clinics), but this time is usually less than 10% of their duties.
- Principle of preventive medicine such as vaccination and nutrition are covered in this course. This course also covers normal developmental and disorders related to behavioral aspects of children at different age group.
- All instructions, clinical duties, rules and boundaries are discussed with the students by the chairman of pediatrics at the beginning of the rotation. Their concerns will be addressed and their questions will be answered.

- At the end of the rotation, the students will be examined through 2 main exams: MiniOsce (20 marks), and Osce (3 stations; history, physical exam and knowledge testing, 20 marks). Evaluation constitutes 15 marks and includes 10 marks evaluation of performance during rounds, and 5 marks to be given on a case report they provide during the rotation including full history and full physical examination. The final written exam at the end of the year is 45 marks divided over 100 multiple choice questions.

Course Learning Outcomes

1. Describe common pediatric disease
2. Describe and recognize common clinical manifestations of common pediatric illnesses, and knowing the usual expected findings on physical examination.
3. Take proper pediatric clinical history, conduct proper physical examination, and detect physical signs of pediatric illnesses
4. Communicate well with patients and their families, and learn how to develop a healthy physician-patient relationship that is professional and respectful to the patients and their families.
5. Generate a problem list or differential diagnosis for common pediatric problems based on the findings of history and completes physical examination.
6. Investigate common pediatric problems in a rationale way, including blood tests, imaging studies and other basic investigations.
7. Knowing the basics of management of common pediatric problems
8. Build up proper relations with colleagues, patients, staff members, nurses, and technicians working in the hospital

Recommended Textbooks and sources of reading:

Nelson Textbook of pediatrics, 21st edition

Nelson Essential of pediatrics, 7th edition

Lectures given during the rotation by the department staff

Uptodate.com

Learning Objectives

(A) Lectures objectives

No.	Title	Objectives
1.	Introduction to pediatrics	<ol style="list-style-type: none"> 1. Know the expectations during the rotation of pediatrics 2. Know the schedule and the rules in pediatric department 3. Understand the special needs for children history taking, physical examination and communication. 4. Know the answers to concerns and questions regarding this rotation
2.	Pediatric history and physical examination 1	<ol style="list-style-type: none"> 1. Know the main elements and details of history taking in pediatrics 2. Understand the differences between history in adults and pediatrics.
3.	Pediatric history and physical examination 1	<ol style="list-style-type: none"> 1. Outline the major systems in examination in pediatrics 2. Understands the norms in physical examination in children that maybe considered abnormal in adults 3. Know the parts of physical examination that is specific for children compared to adults
4, 5	Anemia 1 & 2	<ol style="list-style-type: none"> 1. Classify types of anemia 2. Discuss clinical manifestation and diagnostic tests for common types of anemia 3. Know the basic investigations for a child with anemia 4. Discuss the line of treatment for each type
6, 7	Bleeding disorder (Coagulation disorders 1 &2)	<ol style="list-style-type: none"> 1. Discuss the mechanisms of homeostasis 2. Provide a diagnostic approach for bleeding disorder 3. List major clinical examples of coagulation defect 4. Outline the principles of management of coagulation defect
8.	Acute leukemia	<ol style="list-style-type: none"> 1. Define acute leukemia

		<ol style="list-style-type: none"> 2. Identify the clinical manifestations of acute Leukemia 3. Suggest appropriate investigations for Leukemia & lymphoma with emphasis on histopathological, immunological and cytogenetics classification 4. Identify the prognostic criteria of leukemia 5. Outline the principle management of Leukemia
9.	Renal failure	<ol style="list-style-type: none"> 1. List major causes of acute renal failure (ART) 2. Identify the clinical manifestations of ARF 3. Discuss methods of assessment of renal function 4. List the indications for renal biopsy 5. Discuss briefly lines of management for ART 1. Define chronic renal failure (CRF) 2. List causes of CRF 3. Describe the presentation and clinical manifestations of CRF 4. Suggest a diagnostic a to patients with CRF 5. Outline the treatment of CRF 6. Identify the indications for renal replacement therapy I (dialysis and renal transplantation)
10	Hematuria and Proteinuria	<ol style="list-style-type: none"> 1. Define Hematuria and Proteinuria in children 2. List causes of Hematuria and Proteinuria 3. Identify the clinical manifestations of Glomerulonephritis (GN) and Nephrotic syndrome (NS) 4. Suggest a diagnostic approach to patients with GN and NS 5. Identify common histological patterns of GN and NS 6. Outline the management of GN and NS
11	Infant nutrition and formula	<ol style="list-style-type: none"> 1. List different types of formula used in infants 2. Know the basics about nutrition in different age groups in children 3. Know the daily nutritional needs in pediatrics 4. Understands the normal growth in children
12	Malabsorption	<ol style="list-style-type: none"> 1. Define malabsorption 2. Identify different types of malabsorption. 3. Discuss manifestation and principles of management of malabsorption

13	Cystic fibrosis	<ol style="list-style-type: none"> 1. Understand the genetics and pathophysiology of CF 2. Define symptoms and signs of CF 3. Provide a diagnostic laboratory investigation of CF 4. Outline complications and principles of therapy
14	Antibiotics.	<ol style="list-style-type: none"> 1. Recognize general principles of pharmacokinetics and pharmacodynamics of antibiotics 2. Describe different families of antibiotics 3. Identify the appropriate coverage of each antibiotics family 4. Know the common infections caused by different gram negative and gram positive organisms. 5. Recognize the importance of appropriate use of antibiotics.
15	Epilepsy	<ol style="list-style-type: none"> 1. Recognize the underlying pathology of epilepsy 2. Provide definition and classification of seizures in different age groups 3. Suggest the diagnostic approach and work up of patients with seizures 4. Outline the basic principle of management of epilepsy
16	Meningitis	<ol style="list-style-type: none"> 1. List the pathogens causing acute meningitis in different age groups 2. Describe the pathogenesis of meningitis. 3. Discuss the clinical manifestations in different age group 4. Suggest investigations used to diagnose meningitis. 5. Outline general rules of emergency management of meningitis 6. Discuss common complication of meningitis
17	Cerebral Palsy (CP) and Neural tube defects (NTD)	<ol style="list-style-type: none"> 1. Define CP 2. Describe the epidemiological aspects of CP 3. Recognize different clinical classifications of CP 4. Review the pathogenesis and pathology of CP 5. Discuss aspects of care of patients with CP and their associated morbidities 6. Know the causes, pathogenesis, clinical manifestations and general management for patients with NTD
18	Inborn error of metabolism 1	<ol style="list-style-type: none"> 1. Identify clinical presentation of inborn error of metabolism
19	Inborn error of metabolism 2	<ol style="list-style-type: none"> 2. List criteria for newborn screening and its limitation 3. Outline general categories of inborn error of metabolism
20	Acyanotic congenital heart disease	<ol style="list-style-type: none"> 1. List types and causes of ACHD 2. Review pathophysiology of low perfusion lesions

	(ACHD)	and left to right shunt ACHD 3. Discuss signs, symptoms, diagnostic tests and treatment of common ACHD
21	Cyanotic congenital heart disease (CHD)	1. Identify the clinical significance and types of cyanosis 2. List types and causes of CHD 3. Describe signs, symptoms, and diagnostic tests for common CHD 4. Discuss lines of treatment for common CHD
22	Exanthems	1. Understands the variant definitions of skin lesions 2. Know the pathophysiology of exanthems 3. Discuss the main causes of viral and some bacterial exanthems 4. Recognize the different presentations of exanthems
23	Asthma 1	1. Recognize the pathophysiology of asthma and reactive airway diseases
24	Asthma 2	2. Describe the clinical manifestations of asthma 3. Discuss asthma acute treatment and maintenance
25	Acute asthma	1. Emphasize the management of acute asthma in details
26	Acute flaccid paralysis (AFP)	2. Know the definition of AFP 3. List the main causes of AFP 4. Discuss the basic investigations for patients with AFP 5. Discuss the outline of management
27	Hypotonia	1. Recognize the main cause of Hypotonia in children 2. Know the physical examination for patients with Hypotonia 3. Outline the main diagnostic and management process for patients with Hypotonia.
28	Urinary tract infections (UTI)	1. Differentiate between upper and lower UTI in term of clinical manifestations, physical examination, investigations and management 2. Know the work up and prognosis for patients with UTI 3. Discuss the basic management and antibiotics in UTI
29	Solid tumors	1. Know the different categories of solid tumors 2. Recognize the manifestations of different solid tumors 3. Know the basic investigations, complications and general management for patients with solid tumors
30	Vaccination 1	1. Recognize the national vaccination program main elements
31	Vaccination 2	2. Know the major benefits of vaccines, and the great

		<p>risk of vaccine preventable diseases</p> <ol style="list-style-type: none"> 3. Know the main side effects of each vaccine 4. Know the extra and important vaccines not available in the national program.
32	Pediatric emergencies	<ol style="list-style-type: none"> 1. Recognize the major pediatric emergencies 2. Know the clinical manifestations and general management of different pediatric emergencies.
33	Approach to rheumatological diseases	<ol style="list-style-type: none"> 1. Recognize the general approach to a patient with suspected rheumatological disease in term of most common causes, clinical manifestations and physical examination 2. Know the basics in diagnosis and management of childhood rheumatological diseases
34	Reflux	<ol style="list-style-type: none"> 1. Recognize the signs and symptoms expected in patients with reflux disease in different age groups 2. Know the basic in diagnosis and management of reflux 3. Understand the complications of reflux disease in pediatric patients
35	Approach to a child with arthritis	<ol style="list-style-type: none"> 1. Know the major causes of arthritis in children, with focus on rheumatological causes 2. Discuss how to differentiate between these causes in term of signs, symptoms and investigations. 3. Outline the main lines of management of arthritis in children
36	Neonatal jaundice	<ol style="list-style-type: none"> 1. Classify different causes of NN jaundice 2. Know the basic investigations in neonates with jaundice 3. Know the difference between pathological and physiologic jaundice 4. Recognize the main lines of management for patients with jaundice
37	Neonatal sepsis	<ol style="list-style-type: none"> 1. Know the causes, signs, symptoms, and investigations in neonates with suspected sepsis 2. Classify early and late onset sepsis 3. Recognize the management of NN sepsis
38	Neonatal respiratory distress	<ol style="list-style-type: none"> 1. Know the different causes of NN respiratory distress, with focus on respiratory distress syndrome (RDS) 2. Recognize the basic investigations and management of patients with RDS

39	Wheezing	<ol style="list-style-type: none">1. Know different causes of wheezing in children2. Outline the basic investigations, imaging studies, and general management of different causes of wheezing.3. Differentiate between wheezing due to respiratory cause and other causes like GI pathology.
40	Scorpions and snakes bites	<ol style="list-style-type: none">4. Know the clinical manifestations and emergency management of both scorpions stings and snakes bites
41	Poisoning	<ol style="list-style-type: none">1. Recognize the different causes of poisoning and intoxication in children2. Know the clinical manifestations and findings on physical examinations of poisoning3. Know the long term complications of poisoning4. Discuss the management and antidote of different types of poisoning

Course Assessment

Assessment		
Assessment Type	Expected Due Date	Weight
First Exam		--
Second Exam		--
Midterm Exam (Theory)		--
Evaluation		15
Quizzes		--
Research activity		--
OSCE		20
Mini-OSCE		20
Final Exam (Practical)		--
Final Exam(Written, MCQ)		45
Total		100

Students Learning Outcomes

Student Learning Outcomes(SLOs) (4-8 Maximum) Upon successful completion of this course, students should be able to:			
SLOs	Related ILO(s)* (numbers only)	Evaluation Criteria (MCQ, OSCE, Homework...)	
		Type of Criteria (MCQ, OSCE, Homework...)	Weight (%)
Able to take full history from a pediatric patients, with special focus on pediatric-specific history categories	4	Osce, evaluation	20
Competent in performing full physical examination on a child in different age groups.	5, 6	Osce, evaluation	20
Recognize the pathophysiology, pathology, clinical manifestations and signs on physical examinations for common pediatric problems	7	Osce, mini osce, MCQ	20
Know the basic investigations, general management, complications and prognosis of common pediatric illnesses.	8, 9	Osce, mini osce, MCQ	15
Recognize normal pediatric measures, growth and development	1	Mini osce, MCQ	15
Know the general features of illnesses in pediatrics, including main genetic diseases and other rare diseases.	7	Mini osce, MCQ	10
			100

Intended Learning Outcomes (ILOs)

- 1) Demonstrate a sufficient understanding of the structural organization and functions of the following systems of the human body: circulatory, respiratory, gastrointestinal, endocrine, hematopoietic & lymphatic, musculoskeletal, nervous, and genitourinary systems.
- 2) Conceptualize the cellular, molecular, genetic, and biochemical mechanisms that maintain body's homeostasis and their derangements in disease states.
- 3) Apply their knowledge of human anatomy and function to solve questions regarding major clinical cases and diseases.
- 4) Attain appropriate and systematic clinical history of different medical conditions and settings.
- 5) Demonstrate proficiency in performing clinical skills and procedures.
- 6) Perform relevant physical examination on patients professionally and ethically.
- 7) Identify the major signs and symptoms of disease states, recognizing risk factors and etiologies, in an interdisciplinary approach to differentially diagnose patients.
- 8) Order and interpret results of relevant basic diagnostic procedures, such as laboratory investigations and conventional imaging procedures.
- 9) Apply safe and accurate methods of pharmacotherapy of major disease states.
- 10) Critically appraise research studies guided by evidence-based medicine.
- 11) Demonstrate ability to work in diverse settings and communities.