مركز الاعتماد وضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER

The University of Jordan

Accreditation & Quality Assurance Center

Course Syllabus

Course Name: Pediatrics - 1

1	Course title	**Pediatrics -1**
2	Course number	**0509503**
3	**Credit hours (theory, practical)**	**4**
	Contact hours (theory, practical)	**Seminars 8-9AM, Practical 9:30-12MD, 2-4PM**
4	Prerequisites/corequisites	**Successfully passing Fourth year**
5	Program title	**Pediatrics**
6	Program code	**Awaiting assignment**
7	Awarding institution	**The University of Jordan**
8	Faculty	**Medicine**
9	Department	**Pediatrics**
10	Level of course	**Fifth Year**
11	Year of study and semester (s)	**Fifth year (First, second, or summer semesters), total of 4 weeks**
12	Final Qualification	
13	Other department (s) involved in teaching the course	**The Jordan Univeristy Hospital**
14	Language of Instruction	**English**
15	Date of production/revision	**24/7/2022**

16. Course Coordinator:

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17. Other instructors:

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12.

13.

18. Course Description:

A 4 week rotation all at Jordan University hospital, rotating in the inpatient departments.Emphasis is on acquiring skill of performing a pediatric history and exam , and basic medical knowledge of common pediatric heath problems

19. Course aims and outcomes:

A- Aims:

1. **Acquire the skill of taking full pediatric history and perform physical examination**
2. **Acquire knowledge of normal and abnormal growth**
3. **Acquire knowledge of normal developmental milestones**
4. **Acquire knowledge of childhood vaccination status**
5. **Understand diagnosis and treatment of common pediatric diseases in children.**
6. **Develop communication skills and understanding perspectives of children and their families.**

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to fulfil the following detailed objectives

1. **Intended Learning Outcomes (ILOs)**

2. **In General, fifth year medical students are expected to go through the following learning objectives, with emphasis on initial evaluation, assessment, and diagnostic aspects of common pediatric problems.**
3. **I Part one: MEDICAL HISTORY**
   1.
4. Able to take full pediatric history from a child or a child's caregiver
5. Able to write or document the medical history in a comprehensible organized way
6. Able to present the history in front of supervisors and colleagues
7. Able to structure an assessment with important relevant positive findings and pertinent
8. negatives with a list of the three most likely differential diagnoses

9. **The student is expected to learn proper history taking from a parent or a guardian of a child. History taking in pediatric age groups has some special aspects of importance. A general outline of history taking is provided in the following table:**

10. **Patient profile and chief complaint**: Same as for adults
11. **HPI:** The information is the same for any medical problem. A careful and complete description of the presenting problem, with appropriate chronology is key. Always include pertinent positives/negatives and relevant family history or social history items. An important distinction is that much of the history will be observations from a third party (parent/caregiver). Important questions include: feeding, activity level, , urine output (specific as possible), sleep pattern, exposure

to sick contacts and a description in the parents word what the problem is, how it has changed, what they have tried to alleviate the symptoms and what they think is causing the child's illness.

12. **Past History:**
13. Birth/Pregnancy History: (For infants, this component is particularly important). Often birth/pregnancy history is either relevant to the chief complaint or represents the majority of the PMH. Make sure to include these questions on all infants and any child with a problem that might be related to perinatal/neonatal issues. We usually include this in all children.
    1. Maternal: mother's age, gravida, para, health problems and medications
    2. Pregnancy: complications, pernatal care/labs/tests
    3. Labor: Duration of membrane rupture and complications
    4. Delivery: Gestational age (at a minimum whether term or premature), Mode (vaginal/C-section/forceps/vacuum) and reason for deliveries that are not normal, Apgars.
    5. Neonatal: Duration of hospitalization and any events that occurred shortly after birth.
14. Medical history: Any medical problems or hospitalizations with a brief summary and dates.
15. Surgical history: Any surgeries and dates
16. **Drug history:** Any prescription medications, over the counter medications or herbs/supplements. Include doses when known. Allergies and reactions
17. **Diet (nutritional history):** 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.
18. **Growth and Development:** (This should be part of every history). The way you ask the questions will change over time; Start with an open ended question to parents like "tell me what types of things your child is doing now?". Childhood development is often categorized into 4 domains (social, fine motor, gross motor and language) and screening questions in each domain should be explored (refer to developmental tables)
19. In older children, make sure to ask about their hobbies, activities, school and friends. Assess academic achievement from parents/patient
20. **Immunizations:** 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.
21. **Family history (include family pedigree):** Explore any diseases that are in the family (e.g., diabetes, or other problems resembling the child's problem). Also gently explore any miscarriages or childhood deaths in the family. A family pedigree should be drawn for suspected genetic disorders and consanguinity between parents should be asked.
22. **Social history:**. Explore childcare arrangements—whether it is the family,or others.. Identify Also exposures to ill people. Identify Education level and job of parents ,insurance ,home settings if there is smoking or pets at home.
23. **Review of Systems:** This section is similar to that for adult patients. Remember that preverbal children cannot report many of the symptoms, so parental observation is the main source of information. A sample Review of systems (not conclusive of all possible sympotms):
    1. General: fever, weight loss, activity
    2. Endocrine: change in habitus, weight gain
    3. Eyes: crossing, pain, redness, drainage
    4. HEENT: Ear pain, drainage, hearing loss, nasal drainage, discharge, sinusitis, tooth pain, sore throat, hoarseness
    5. Resp: cough, wheezing, apnea, cyanosis, difficulty breathing
    6. CV: cyanosis, chest pain, syncope, fatigability
    7. GU: frequency, dysuria ,urine output, hematuria
    8. Skin: rashes
    9. Neuro: seizures, loss of consciousness
    10. GI: feeding/appetite, vomiting, diarrhea, constipation, blood in the stool, abdominal pain
    11. Musculoskeletal: joint swelling, tenderness, weakness
    12. Psych: mood changes, sleep problems
    13. Heme/lymph: bleeding, anemia, jaundice, swollen glands

14. **2-Physical Examination**

15. 2a-Able to perform pediatric physical examination for all systems
16. 2b- Able to perform neonatal physical examination for all systems
17. 2c-Able to perform Ballard scoring for gestational age assessment
18. 2d-Able to measure and interpret vital signs
19. 2e-Able to measure growth parameters
20. 2f-Able to plot growth parameters on growth charts
21. 2g-Able to assess a child's development at all age stages; infant, toddler preschool, and school age groups
22. 2h-Able to assess the degree of dehydration
23. 2i-Able to assess nutritional status
24. 2j-Able to take and interpret vital signs
25. 2j-Able to perform sexual maturation assessment
26. 2k- Able to interpret physical examination findings

24. **The student is expected to perform systematic physical examination on a child. The approach to the physical examination will vary with the age of the child. There are special maneuvers that are done at each age. A general outline of Physical examination: is provided in the following table:**

25. **Vital Signs:** HR RR Temp BP (oxygen saturation in special cases)
26. **Growth parameters:** Height (or length), Weight, Head circumference, BMI, Describe the percentiles.
27. **General:** Describe the state of alertness, mood, willingness to cooperate with the exam and whether the child is in distress, color of child if pale,cyanosed or jaundiced,presense of respiratory distress,presense of dysmorphic features
28. **Head:** For infants and children feel for the fontanelle; comment on the shape of the head
29. **Eyes:** Note presence of the red reflex in all children; check papillary reaction, lids/conjunctiva
30. **Ears:**. Check TMs bilaterally 31. **Nose:** Check for discharge, turbinate color 32. **Throat:** Check for teeth/caries. Inspect the tongue, buccal mucosal and the posterior pharynx for erythema, enlarged tonsils. Feel for submucous cleft palate.
33. **Neck:** Gently palpate neck for masses and assess range of motion (often by observation)
34. **Lymphatic:** Check LN in neck, axilla and groin.
35. **Chest:** Observe for signs of respiratory distress (nasal flaring, retractions and grunting) and deformaties. Normal respiratory rate varies with age; palpate for tenderness,locate trachea position and apex beat,perform chest expansion,perform tactile vocal fremitus ,percuss, then auscultate anterior and posterior lung fields.
36. **Cardiovascular:** Observe for cyanosis, respiratory distress and hyperdynamic precordium. Locate apex beat.Palpate the precordium (for thrills and heaves); auscultate as in adults---pediatric heart rates are faster than adults thus distinguishing systole and diastole is more difficult. An S3 may be found in normal children (represents rapid ventricular filling). Many children will have benign murmurs (of no medical importance)- Palpate the peripheral pulses as in adults. (Femoral pulses are particularly important to feel in neonates when screening for coarctation of the aorta).
37. **Abdomen:** observe, auscultate and palpate,percuss as in adults. Children often have a palpable liver edge.

38. **GU:** As in adults, and determine Tanner staging
39. **Musculoskeletal:** Much of this portion of the examination is observation for tone and strength. In neonates, observe for increased or decreased tone…both are pathological. When children are older and can follow directions, the approach is similar to an adult exam. There are also special maneuvers to screen for congenital hip dysplasia (Barlow/Ortolani manoeuvres).
40. **Neurological:** Much of this exam is by observation (especially the CN). Children have DTR's just like adults that should be tested. Neonates have primitive reflexes (like an upgoing toe with a Babinski test).
41. **Developmental Exam:** To determine the developmental age of the child is very important. Examination manoeuvres differ with age, Manoeuvres can be derived from the four domains of developmental assessment as used in history taking. In addition assessment of hearing and vision should be included.

42. **I-c Basic Laboratory assessment:**
43. **The student is expected to be able to interpret and analyse common laboratory values, and come up with possible etiologies for abnormal values, provide additional ways to assess and/or to confirm his differential diagnosis, as well as to generate a general plan of solving the problems.**
44. **The following table outlines the Laboratory tests that are included in this learning objective:**

45. Complete blood count interpretation
46. Serum electrolyte level assessment, with kidney function testing
47. Liver function tests
48. Results on urine routine analysis and microscopy
49. Results on Lumber Puncture
50. Interpretation of chest radiograph with common findings
51. General Interpretation of electrocardiogram (determining rate, rhythm, axis, ventricular hypertrophy, intervals, and common rhythm disturbances)
52. Blood gas interpretation with acid base balance/ imbalance

Special Pediatric Subjects and the Intended learning Objectives (ILO'S)

1. **Breast feeding & Infants' formula**

- Rate of exclusive breast feeding, national and international
- Benefits, of breast feeding
- Composition of breast milk and difference from cow milk
- National and international support of Breast feeding.
- 10 steps to support breast feeding.
- Baby friendly hospital
- To identify infant formulas, their uses and the different types (special, premature and regular).
- To Know the correct mixing and storage of infant formulas.

2. **Dehydration & electrolytes imbalance**

- Calculate maintenance fluids in Children
- Assess for dehydration
- Differentiate between types and degrees of dehydration
- Manage disturbances of sodium

3. **Acute Gastroenteritis**

- To know the causative agents for acute diarrhea in children
- To identify the clinical presentation for each of the causative agents for acute diarrhea
- To know the Diagnostic work up and treatment for acute diarrhea

4. **Chronic diarrhea**

- To know the causes for chronic diarrhea in children
- To identify the clinical presentation for each of the causes of chronic diarrhea
- To know the Diagnostic work up and treatment for chronic diarrhea

5. **Normal growth**

- To understand normal growth in children.
- To know how to measure growth parameters (height/length, weight, head circumference) in children and how to plot growth charts.
- To identify overweight and obesity in children

6. **Disorders of abnormal growth**

1. To know etiologies of short stature in children and to be able to identify characteristics of each type.

7. **Neonatology**

Physical Examination of The Newborn

- Recall the timing of physical examinations
- Explain the benefit of each PE encounter
- List the normal PE finding in the newborn
- Recall the steps of physical examination
- Define normal breathing pattern
- Define respiratory distress
- List RD signs & symptoms

- Identify causes of RD in a neonate
- Differentiate RD different causes

8. **Normal Newborn**

- Understand the role of the prenatal visit in establishing a newborn medical care
- Describe Abgar Score
- Understand when the baby needs to be assessed
- Understand Voiding and stooling Pattern
- Understand the risks for hemorrhagic disease of newborn , and outline anticipatory guidance that may be preventive
- Identify the most common benign newborn problems after birth
- delineate appropriate guidance
- Identify types of mandatory neonatal screen

9. **Neonatal Jaundice**

- Know bilirubin physiology, including pathways of synthesis, transport, and metabolism, in the newborn
- Know the differences between physiologic and nonphysiologic jaundice
- Know how to use a pre-discharge bilirubin measurement to predict the risk of severe hyperbilirubinemia
- Bilirubin toxicity and pathologic hyperbilirubinemia
- corelation between human milk and jaundice
- main management outlines

10. **Assessment of normal development and flags of developmental delay**

- Understand the stages of development in infants and children and how to perform developmental assessment
- Understand the importance of screening tools
- Understand the etiologies that lead to developmental delay and how to look for them in history and examination
- Understand the approach to developmental delay
- To be able to determine cases with developmental delay and classify it
- To be able to determine cases with developmental regression

11. **Seizures**

- Definitions of seizures, epilepsy, epilepsy syndromes and drug resistant epilepsy.
- Understand etiology and differential diagnosis of seizures
- Learn the basic concepts of management of seizures which include diagnosis, investigations treatment and outcome

Infectious diseases;

12. **Vaccines**

- To know the different types of childhood vaccines (live-attenuated, killed, whole-cell) and the characteristics of different types.
- To know national vaccination program schedule, and to compare the former with international programs(CDC)
- To identify vaccines that are not included yet in the national program
- To identify common sides effects , complications, and contraindications of childhood vaccines

13. **Approach to a child with acute febrile illness**

- Define fever and where and how to measure it
- Know the red flags from the history and exam to suspect bacteremia and "toxic" appearance
- Know the definitions of SIRS, Sepsis, and septic shock
- Know most common infectious agents for neonatal and pediatric sepsis
- Know how to order in the septic work up
- Know proper antimicrobial treatment for each age group

14. **Meningitis**

- Be able to recognize signs and symptoms of meningitis
- Know the most common causative agents of meningitis
- Know the proper work up to diagnose meningitis
- Know the proper treatment for each type of meningitis
- Know the short and long term complications of meningitis

15. **UTI**

- Know symptoms and signs of UTI and differential diagnosis of dysurea
- Know epidemiology, diagnosis and management of UTI
- Know risk factors, complications and prevention of UTI
- Know imaging needed in children with recurrent febrile UTI

16. **Upper respiratory tract disorders**

- To identify common types of upper respiratory tract infections and their clinical presentation, diagnostic investigations, and potential complications.
- To focus on causes of upper Airway obstruction and clinical presentations

- To be competent at main lines of treatment for URTIs

17. **Wheezing**

- To identify pathophysiology, types , and possible causes of wheeze in children.
- To be competent in the clinical approach to a child with wheeze in terms of history , physical examination and main diagnostic investigations needed .

18. **Lower respiratory tract disorders**

- To identify commonly encountered lower airway conditions in children.
- To diagnose asthma and differentiate clinically between asthma and bronchiolitis.
- To diagnose pneumonia among different pediatric age groups.

19. **Heart failure**

- Understand the basic principles of cardiac cycle, and cardiac output
- Understand the definition of heart failure
- Describe the symptoms and signs of heart failure in children and infant, and understand their physiologic basis
- Be able to relate the signs to the common causes of heart failure in children

2. **Congenital heart disease**

- Review cardiac anatomy
- Describe the main differences between fetal circulation and post-natal circulation
- Understand the classification of congenital heart disease and their basis
- Understand the types, physiology, presentation, and general management of patients with ventricular septal defect
- Understand the physiology and presentation of patients with tetralogy of Fallot.

3. **Endocrinology**

- To understand normal growth in children.
- To know how to measure growth parameters (height/length, weight, head circumference) in children and how to plot growth charts.

- To know etiologies of short stature in children and to be able to identify characteristics of each type.
- To identify overweight and obesity in children
- To know basics of diagnosis and management of type 1 diabetes.
- To understand basics of pathology of congenital adrenal hyperplasia
- To know presentation patterns of infants with congenital adrenal hyperplasia
- To know basic management of congenital adrenal hyperplasia
- To know basic management of treatment of adrenal crisis
- To identify causes of congenital hypothyroidism and universal screening.
- To identify symptoms and signs of congenital hypothyroidism
- To know management of congenital hypothyroidism

20. Topic Outline and Schedule:

1.

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
2. General pediatrics	**3. 4**	**4. JUH instructors**	**5. See ILOs**	**6. Attendance, clinical evaluation, osce at end rotation**	**7. See references**

8.

21. Teaching Methods and Assignments:

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

1. **Bedside clinical teaching rounds.**
2. **Lectures**
3. **Seminars during rounds**

22. Evaluation Methods and Course Requirements:

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

Assessment	Point %	Date
Evaluation of performance, attendance, participation in seminars, ability to make assessment by history and physical exam, problem solving skills, presentation skills…. etc	20%	End of rotation
OSCE exam	30%	End Rotation
Final Exam	50%	End of Academic year

23. Course Policies:

1. Attendance policies: As per university Regulations: Absence should not exceed 15% of rotation days.
2. Absences from exams and handing in assignments on time: As per university Regulations: only legal excuses accepted after review by faculty administration.
3. Health and safety procedures: As per hospital policies and requirements: immunizations, scrubs, etc
4. Honesty policy regarding cheating, plagiarism, misbehavior: Those captured will be withdrawn from exam and referred to faculty's relevant disciplinary committee.
5. Grading policy: letter system as per university regulations.
6. Available university services that support achievement in the course: Lecture halls with audiovisual facilities, Skills Lab/ Library/ related hospital facilities.

24. Required equipment:

1. Lecture rooms

25. References:

A- Required book (s), assigned reading and audio-visuals:
Nelson Textbook of Pediatrics, 19th edition, by R. Kliegman et al.

B- Recommended books, materials, and media:
1. **E Learning resources**
2. **Harriet Lane Handbook of Pediatrics,**
3. **Online modules in pediatric GI (created by Indiana University).**
http://radtf.indyrad.iupui.edu/radtf Username: mfeist Password: student

26. Additional information:

None

Name of Course Coordinator: ----------Signature: ---------- Date: ---------- Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File