UNIVERSITY OF THE PHILIPPINES
College of Medicine – Philippine General Hospital
University of the Philippines Manila

Pediatrics 251 – Integrated Clinical Clerkship II in Pediatrics
1st and 2nd Semester, AY 2023-2024

COURSE GUIDE

COURSE DESCRIPTION

Welcome to Integrated Clinical Clerkship II in Pediatrics! Good job for making it this far. In this course, you will get your first-hand experience in diagnosing and managing pediatric patients with common conditions requiring admission into hospital. This is a 4-week clinical rotation and you'll be part of a team of doctors taking care of patients at the emergency room, nursery/neonatal ICU and the wards. At the end of your rotation, you should be quite comfortable and confident in interacting with patients, getting salient points in history, doing a physical examination, coming up with your primary working impression after considering several differential diagnoses, requesting for the appropriate diagnostic tests, providing the proper management and performing procedures. Your consultants and resident monitors will be around to guide you throughout this process.

The 4-weeks will be divided as follows: 2 weeks at the pediatric wards, 1 week at the PER and 1 week as catcher/DRI. All rotations will be face to face (as long as circumstances allow) but there are some online requirements (ie, quizzes) that you will have to fulfill during your rotation. The lectures and quizzes can be accessed through the learning management system (VLE). All activities will be face to face except for some conferences that use the hybrid format. The students will be asked to submit a portfolio containing their (1) order sheet for co-managed ward patients, (2) progress notes for co-managed ward patients and a reflection paper at the end of their rotation.

COURSE LEARNING OUTCOMES

After completing this course, you should be able to achieve the following:

1. To show proficiency in history taking and physical examination of pediatric patients
2. To diagnose common childhood in-patient illnesses incorporating the pathophysiology of the disease
3. To decide on the appropriate diagnostic tools and interpret the results of common childhood in-patient illnesses
4. To formulate a plan of management for common childhood in-patient illnesses and preventive care
5. To perform common pediatric procedures competently

6. To exhibit the proper attitude and dedication to serve others that each UP medical graduate should possess, as well as develop confidence and patience in handling pediatric patients

COURSE OUTLINE

I. Review of Pediatrics
   A. History Taking and Physical Examination
   B. Fluids and Electrolytes
   C. ABG Interpretation
   D. Chest X-ray Reading
   E. ECG Interpretation

II. Must Know Topics

	Topic
General Pediatrics	Growth and Development
	Dehydration, fluids and electrolytes
	Preventive pediatrics
	Pediatric procedures
	Pediatric Resuscitation
	Pediatric X-Ray Interpretation
Allergy and Immunology	Primary Immunodeficiency
	Anaphylaxis
	Adverse Drug Reactions
Cardiology	Myocarditis
	Rheumatic Heart Disease
	Rheumatic Fever
	Congenital Heart Disease
	Tetralogy of Fallot
	Patent Ductus Arteriosus
	Kawasaki Disease
	Infective Endocarditis
	Shock
	Pediatric ECG Interpretation
	Rhythm Disturbance
Endocrinology	Diabetes Mellitus Type 1
	DKA
	Cushing Syndrome
	Hypothyroidism
	Hyperthyroidism
	CAH
	Diabetes Insipidus
Gastroenterology	Acute Gastroenteritis
	Viral Hepatitis
	Biliary Atresia
	Kwashiorkor
	Marasmus
	Acute Gastritis

	Jaundice
Genetics	Trisomy 13
	Trisomy 18
	Maple syrup urine disease
	Newborn Screening
Hematology-Oncology	Acute Leukemia
	Chronic Myelogenous Leukemia
	Tumor lysis syndrome
	Langerhans cell histiocytosis
	Anemia
	Hemophilia
	Lymphoma
	Solid Abdominal Masses
Infectious Disease	Dengue Fever
	Typhoid Fever
	Pulmonary Tuberculosis
	Measles
	Leptospirosis
	Shigellosis
	Malaria
	COVID
	Fever of Unknown Origin
	Viral Exanthems
Neurology	Meningitis
	Status Epilepticus
	Febrile Seizures
	Brain Abscess
	TB Meningitis
	Meningocoele
	Increased intracranial pressure
Pulmonology	Community Acquired Pneumonia
	Bronchial Asthma
	Bronchitis
	Pulmonary tuberculosis
	ABG Interpretation
Nephrology	Nephrotic Syndrome
	Nephritic Syndrome
	Urinary Tract Infection
	Hypertension
	SLE
	Chronic Kidney Disease
	CAKUT (Congenital anomalies of the kidney and urinary tract)
Neonatology	Newborn Care
	Breastfeeding
	Hyaline Membrane Disease
	Neonatal Jaundice
	Neonatal Sepsis
	Necrotizing enterocolitis
	PPHN
	Hemorrhagic Disease of the newborn

MODE OF DELIVERY

The videos on the review of pediatrics are available through the UP Manila VLE portal as well as the quizzes. In order to access this, you should have a UP Manila email address. Please contact the Information Management System at ims@post.upm.edu.ph if you do not have an existing UP Manila email address or if you have any issues with logging in.

Your rotation will be done at the Philippine General Hospital where you will be assigned at the pediatric wards, pediatric emergency room and the nursery or Neonatal ICU for a hands-on experience.

The faculty course coordinator will be available weekly on Fridays 10-12nn for consultation.

COURSE MATERIALS

The primary textbook that will be used are: Nelson Textbook of Pediatrics (21st edition) and Fundamentals of Pediatrics (1st edition).
Additional course materials are available via the VLE in the “Additional Resources” folder.
Zoom links to Department of Pediatrics conferences and audits

STUDY SCHEDULE

Week Number	Module/ Topic	Learning Resources	Learning Tasks
1	Review of Pediatrics	UPM VLE – Pediatrics 251 Folder of Videos Readings on how to present Nelson’s Pediatrics Fundamentals of Pediatrics	Watch the videos and answer the quizzes
	Common pediatric conditions in the PER/Ward/Nursery	Actual cases Textbooks Nelson’s Pediatrics Fundamentals of Pediatrics Self-study	Non-graded preceptorial (how to present) Order sheet/progress notes of co-managed ward patients
2	Common pediatric conditions in the PER/Ward/Nursery	Actual cases Textbooks Nelson’s Pediatrics Fundamentals of Pediatrics Self-study	Present a case (or preceptorial) on one of the common in-patient conditions (graded activity) Order sheet/progress notes of co-managed ward patients

3	Common pediatric conditions in the PER/Ward/Nursery	Actual case Textbooks Nelson's Pediatrics Fundamentals of Pediatrics Self-study	Present a case (or preceptorial) on one of the common in-patient conditions (graded activity) Order sheet/progress notes of co-managed ward patients
4	Common pediatric conditions in the PER/Ward/Nursery	Paper Cases Textbooks Nelson's Pediatrics Fundamentals of Pediatrics Self-study	Oral Examination Order sheet/progress notes of co-managed ward patients Reflection paper

COURSE REQUIREMENTS

Course Requirement 1 – Quizzes
There are 5 videos that can be accessed via UPM VLE. The videos are meant to be reviews on the following topics: history and physical examination of pediatric patients, basic fluids and electrolytes, ABG interpretation, Chest X-ray reading and ECG Interpretation. It is recommended that you answer the pre-test prior to watching each video. The pre-test will not count towards your final grade. Make sure that you watch the videos and read the prescribed textbook **PRIOR** to answering the 10-point quiz (to be answered in 30 -minutes) based on the video/lecture/handout/readings that needs to be answered. This will account for 5% of your grade. The quiz will be opened from 7am on the 1st day of your rotation and be closed by 5pm on the last day of your rotation.

Course Requirement 2 – Preceptorials
The students are given a chance to interview a patient that is admitted in the wards, NICU or pediatric ER. Two preceptors are assigned to a group of 5-6 students who will meet the group three times during their 4-week rotation. The cases chosen will be on the common pediatric illness requiring admission to the hospital. The student should discuss the following: important points in the history taking, physical examination findings to be correlated with the pathophysiology of the disease, diagnostic examinations including their rationale and expected findings, therapeutic management and correlation to pathophysiology and anticipatory guidance or home instructions. References should be cited accordingly and critically appraised if applicable.

The first preceptorial will not count towards the students' final grade as it will serve as a learning activity on how to present a case properly. The next 2 preceptorials will be graded. Preceptorials will account for 20% of your grade.

The activity will be graded as follows:

Category	Grade
Complete and relevant history (points to elicit in history taking)	15
Physical examination findings to look out for	15
Differential Diagnosis	15
Present working impression and able to identify problems of patient	10
Appropriate management plan	5
Answer questions pertinent to the case adequately	5
Utilize critically appraised medical literature to further understand the case	5
Presented in an organized, integrated and clear manner	5
Used visual aids that are appropriate, concise and with clear content	5
Demonstrate good communication skills	5
Enthusiasm during the presentation and shows initiative in getting and sharing information	5
Respect for preceptor and peers	5
Good time management	5
TOTAL	**100**

Course Requirement 3 – Hospital Rotation / Supervisor Evaluation
Students will be part of a team of doctors taking care of patients at the non-COVID DRI/delivery room, the non-COVID wards and the pediatric emergency room. Each student must have rotated 2-weeks at the wards, 1-week at the PER and 1 week as Catcher/DRI. The students will be graded in each of the areas they will rotate in. This will comprise 20% of their total grade.

For the wards, the following scheme will be followed:

1. Students will be assigned to either ward 9 or 11. Students assigned to ward 9 will stay there for two week, likewise for ward 11.
2. Students will be assigned patients (the number may vary depending on the number of patients admitted) that they will take care of and be in-charge of for the duration of their rotation. The student-in-charge (SIC) is expected to co-manage simple cases with supervision of the resident-in-charge (RIC).
    - The role of the SIC is to do daily rounds with the service residents. S/he should make notes (incoming/admitting notes, progress notes and discharge notes). They will carry out orders for their patients, perform procedures, monitor and accomplish needed paperwork for their patients.
    - The student will keep a portfolio (further details in the next Course Requirement) which will contain progress notes and daily orders for their co-managed patients.
3. ALL non-duty students must report daily to do rounds, join service rounds/consultant rounds, make progress notes and carry out orders for their SIC patients.
4. SICs must endorse their patients to the duty team and receive endorsements from the post-duty team.
5. Clerks will join the admission conference with the chief resident every Monday, Tuesday, Thursday and Friday from 7am to 8am.

For the DRI, the following scheme will be followed:

1. Students on duty at the DRI are expected to take care of the DRI patients, do procedures (including vaccination), and monitor babies, and join in service/consultant rounds.
2. Students may be asked to present a case to the NICU fellow. This is a non-graded formative activity.

For the delivery room, the following scheme will be followed:

1. Students assigned to the DR will assist in catching babies, perform resuscitation guided by the catcher resident-on-duty as necessary, do procedures, and accomplish necessary paperwork for each delivery.
2. Students may also be asked to monitor babies at the recovery room, and to provide breastfeeding support.

For the Pediatric Emergency Room, the following scheme will be followed:

1. Students assigned at the PER will work with a team of doctors to resuscitate newly admitted patients at the PER, facilitate procedures and monitoring of patients, and join in service/consultant rounds.

Course Requirement 4 – Portfolio

Students rotating in the wards are required to keep a portfolio. This portfolio will be submitted at the last day of their rotation and will comprise 10% of their grade. The contents of the portfolio are as follows:

1. Progress notes for the patient that the student is co-managing. Students may be given 1-2 patients to be co-managed with the resident. In general, progress notes are done every 3 days for non-toxic patients (unless there is something remarkable that happens then, progress notes should be made for that day even if it does not fall in the q3days cycle) and daily for toxic patients. The progress notes (hard copy) must contain the problem list, pertinent history and physical examination and the thoughts of the student regarding the diagnosis or clinical course. The student no longer has to enter this in RADISH. An example can be seen in Appendix A of this course guide.

2. Since the students are co-managing patients, they should act as the attending physician and conduct daily rounds of their patients. Their orders for the day should be written (hard copy, NOT typewritten) and simulate an actual chart. They should add the physical exam, changes in the diagnosis (if any), the diagnostic exams, therapeutic and non-therapeutic management. An example can be seen in Appendix B of this course guide.

3. The students are asked to make a reflection paper regarding their rotation in pediatrics. The following are the questions that can be used as a guide: What did I learn from my clerkship rotation in Pedia considering that there is limited or no direct patient interaction due to the pandemic? How were my interactions with my blockmates and with the preceptors? Did I maximize my rotation? How could I have maximized my rotation more? How do I feel rotating in Pedia now as compared when I was an

LU5student? What are my suggestions to improve my rotation in Pedia? What other teaching-learning activities could I suggest?

* The LO will collate all of the reflection papers per block and e-mail it to upcmlu6pediatrics@gmail.com. This is due 1 week after the last day of the rotation.
*The portfolio with the orders and progress notes are due on the last day of the ward rotation and should be submitted to the resident monitors.

Course Requirement 5 – Oral Exams
During the last week of the students' rotation, an oral examination to be administered by the faculty preceptor assigned to the block will be scheduled. Each student is given a case that s/he will have to discuss in 15 minutes. Cases will be based on the common pediatric conditions encountered in the emergency room, nursery/NICU and the wards. The student should discuss the following: important points in the history taking, physical examination findings to be correlated with the pathophysiology of the disease, diagnostic examinations including their rationale and expected findings, therapeutic management and correlation to pathophysiology and anticipatory guidance or home instructions. The oral examination will make up 20% of their final grade.

The following are the cases/conditions that the students must master:

Topic
Anaphylaxis
AGE with signs of dehydration
Anemia
RHD
CAH in crisis
DKA
Biliary atresia
MSUD in crisis
Dengue with warning signs
PTB
Febrile seziures
Meningitis
PCAP C or D
Asthma in exacerbation
Nephritic syndrome
UTI
HMD
Neonatal jaundice

Course Requirement 6 – Written Exams
The students will have a 100-point final examination to be given at the end of the year covering the topics listed above. This will comprise 15% of their final grade.

In accordance with the UPCM, the LU6 students will have a comprehensive examination that

will account for 10% of their final grade.

GENERAL GUIDELINES

All students should ensure that they are in their proper/appropriate PPE when going on duty. Level 2 PPE should be worn. When there is an intubated patient or when at the NICU, students should be on PPE 2.5. Students are discouraged from staying in their posts outside of their scheduled duty. Everyone must adhere to the infection control guidelines set by the hospital.

Students should do a daily temperature and symptom check on themselves. This should be reported to BESTS. Aside from this, students who will be going on duty should report whether they have symptoms or not to their LO prior to going to the hospital. Duty clerks will have to show their health supervision form (filled-up online) to the senior resident on duty within 30 minutes of arriving at their post

Any student who has the following symptoms: fever, cough, runny nose, muscle aches, repeated chills, sore throat, loss of taste or smell, headache, vomiting, diarrhea, difficulty breathing should NOT come into the hospital and should report to the resident coordinator who can assist them in reporting to the UPHS (UPHS number 0961-7321764 or email hs.uppgh@up.edu.ph)

DUTY SCHEDULE

Wards

Duty is defined as 5pm-5am. Pre-duty students are asked to come to the wards at 7am-5pm. However, if they are SIC for an endorsed patient, they must endorse during the afternoon endorsements to be received by the duty team.

Students on duty for the day must come to the wards from 7am-12nn to do their SIC work. They may go home at 12nn to prepare for their duty. They must arrive at the wards at 5pm to join afternoon endorsements. Their duty will be from 5pm-5am. They may rest or go home at 5am. They must come back at 7am to join the morning endorsements (7am-8am) and to hand-off to the team. They may rest from 8am-9am. They are asked to do their SIC work from 9am-12nn. However, they may go home earlier provided they have accomplished their SIC work and there are no other activities by the service (ie., consultant rounds).

PER

Students on duty at the PER will follow the 12-hour duty scheme of 7am-7pm and 7pm-7am.

Catcher/DRI

Students on duty as catcher will be AM Duty (7am-7pm) and PM duty (7pm-7am). Those who are on PM duty are required to go to Wards 15 and 16 from 7am-12nn and do rounds on the roomed-in babies.

Summary of Course Requirements and Grading

Category	% Distribution
Quizzes	5%
Portfolio	10%
Preceptorials/Paper Case	20%
Supervisor Evaluation	20%
Oral examination	20%
Final Exam	15%
Comprehensive Exam	10%

University Grade	MPL 70
1.0	96.50-100
1.25	92.50-96.49
1.5	89.50-92.49
1.75	86.50-89.49
2.0	82.50-86.49
2.25	79.50-82.49
2.5	76.50-79.49
2.75	72.50-76.49
3.0	69.50-72.49
4.0	62.50-69.49
5.0	</= 62.49

Summary of Expected Outputs

Week 1-3	Quizzes (graded based on video) 3 SGD (1 not graded and 2 graded)
Week 4	Oral examination Submission of portfolio

ABOUT THE INSTRUCTOR

I am Dr Mary Ann Abacan and I am the current head of the LU6 Committee in Pediatrics. The LU6 Committee is comprised of eight other pediatricians of varying subspecialties (Dr Christina Lozada, Dr Lorna Abad, Dr Resti Bautista, Dr Mianne Castor, Dr Lourdes Genuino, Dr Marissa Lukban, Dr Lourdes Resontoc, Dr Justine Yap). We are all ready to guide you through your rotation. I may be contacted through mrabacan@up.edu.ph.

HOUSE RULES

We are here to provide a service to our patients and we should treat them with utmost care and respect. We abide by the data privacy guidelines and conduct ourselves with professionalism. We do not post details or pictures on social media. We value integrity and should not plagiarize.

APPENDIX A – Sample of Progress Notes

Patient's Name	Dela Cruz, Juan	**Age/Gender**	3/M	**Present Working Impression**
Case Number	012345	**Location**	W11B6	➢ Pediatric community-acquired pneumonia, severe, resolving ➢ Iron-deficiency anemia ➢ Underweight, stunted
Date of Admission	7/31/2023			
Student-in-charge	Dr. SIC			

PROGRESS NOTES
5 Aug 2023
5th Hospital day, 4th Ward day

DATE IDENTIFIED	PROBLEM	S/O	PLAN/S
7/31/23	Pediatric community-acquired pneumonia, severe, resolving	• 3-day history of non-productive cough, fever (Tmax 39), unresolved by Ambroxol intake at home. • (-) penta-HiB or PCV immunization • CBC showed leukocytosis with neutrophilic predominance (WBC 23.5, neutrophils 90, lymphocyte 10) and chest-xray findings consistent with pneumonia (infiltrates on the mid-base, bilateral lung fields). The patient needed oxygen support with 5LPM via face mask. Cefuroxime (100mkday) IV q8 was started. On the 3rd hospital day, the patient tolerated room air (RR 18, o2 sats 98%), occasional crackles, no retractions. The repeat CBC done on the 3rd day of antibiotics is pending.	• If there is improvement in the CBC and given the patient's improving course, a trial of oral antibiotics may be done and once tolerated, discharge planning will commence.
7/31/23	Iron deficiency anemia	• During the physical examination at the ER, the patient was noted to have pale nail beds but with pink conjunctivae. On CBC, there was decreased hemoglobin (HgB 95) and note of decreased MCV and MCHC. On diet recall, the patient eats mostly rice and chicken.	• Oral iron supplementation was started at 5mg/kg/day and the plan is to re-check the CBC after three months. The parents will also be advised regarding the proper meals for the child. •
8/1/23	Underweight, stunted	• Weight is 11kg (z < -2) • Height is 85 cm (z <-2) • No ascites/edema	• For 72 hour food recall and nutritional assessment • For computation of catch up calorie and upbuilding • Micronutrient supplementation

APPENDIX B – Order Sheet Sample

JdLC 3/M Weight: 11 kg Length: 87 cm
5th HD, 4th Ward day

- PWI: Pediatric community-acquired pneumonia, severe, resolving
  Iron-deficiency anemia
  Underweight, stunted

8/2/23 645am RR 18, HR 93 Sats 98% T 36.5 Occ'l crackles base RLF (-) retractions	- Diagnostics - repeat CBC today -Therapeutics Cefuroxime (100mkday) 400 mg IV q8 D3+1 Paracetamol 250mg/5ml (10mkday) 2.5ml per orem as needed for T ≥38C Ferrous sulfate + Vitamin B12 syrup (4.5mg/kg/day) 3ml 3x/day per orem Zinc sulfate 55 mg/5mL syryp, 5 mL once a day per orem -Diet for age with SAP -Start age-appropriate milk 1 glass 2x a day on top of meals -IVF: D5IMB (50% FM) @ 22cc/hr -VS q4 hours -WOF: tachypnea, difficulty breathing -Refer as needed Abacan