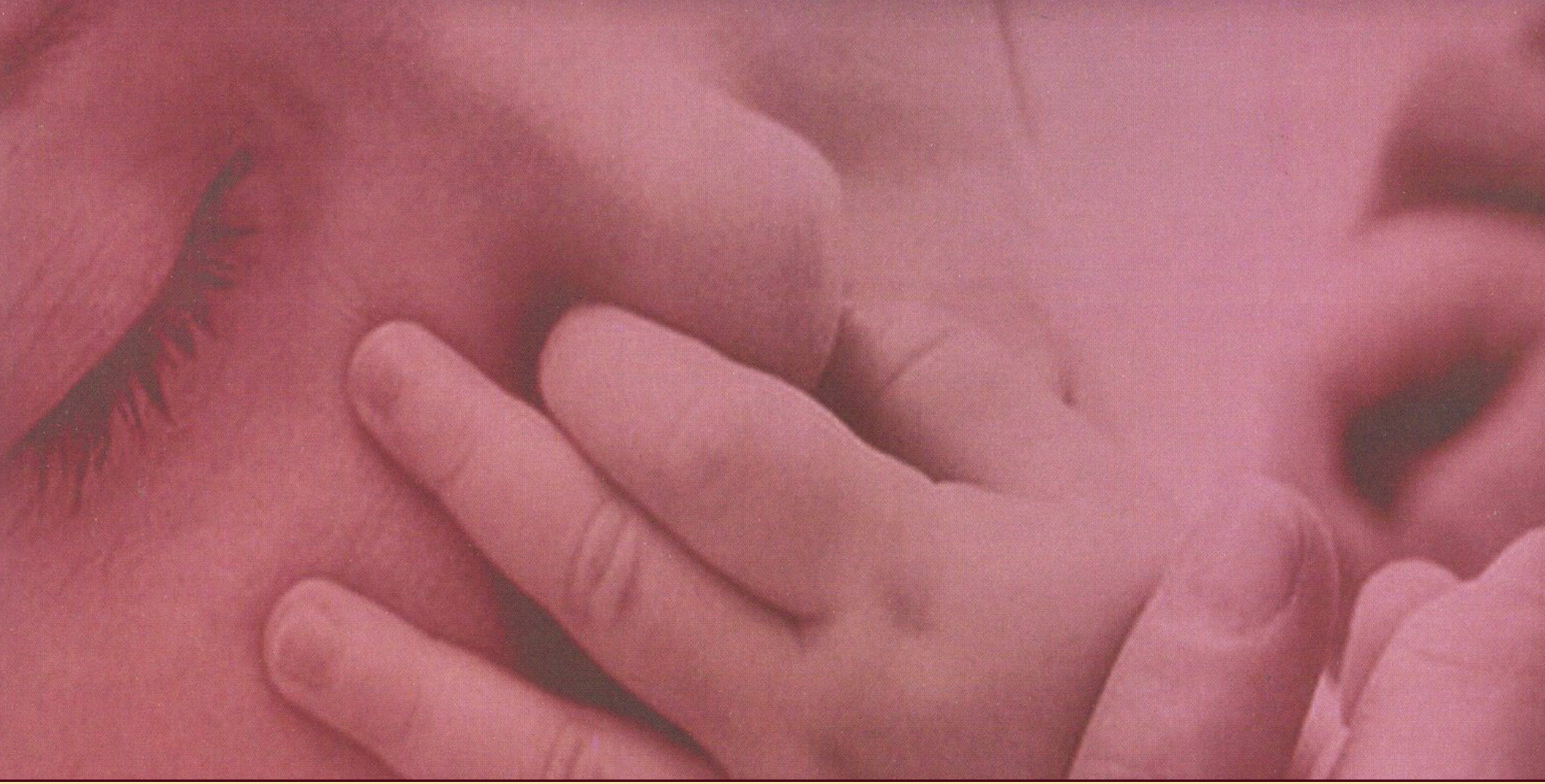

PHILIPPINE PEDIATRIC SOCIETY, INC.

A CURRICULUM FOR UNDERGRADUATE PEDIATRIC EDUCATION

For Philippine Medical Schools

(e-UPEC Manual 2022 edition)

Chief Editors:

Carmelo A. Alfiler, MD
Ma. Cecilia D. Alinea, MD
Joselyn A. Eusebio, MD

Associate Editors:

Lorna R. Abad, MD
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Naomi S. Nocheseda, MD
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The Philippine Pediatric Society, Inc.

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Dedicated
to

This Generation's
Teachers
and
Learners
of
Pediatrics

and
to

Filipino Children
of
Today
and
Tomorrow

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NOTICE

The authors and editors of this manual emphasized pediatric disorders and concerns being encountered during the time of publication. Due to epidemiologic changes and dramatic advances in medical diagnosis, evaluation and management, information may be different at a future time.

The Physician is therefore urged to continuously update himself with current trends and developments in Pediatrics. The Teacher is also encouraged to update his syllabus accordingly in consonance with the prevailing epidemiologic picture and emerging health issues.

THE EDITORS

FOREWORD

This revised/updated version of the PPS Undergraduate Pediatric Education Curriculum (e-UPEC) Manual, published in hard and soft copies in time for PPS' 75th anniversary, follows the very first edition in 2001, a second edition with expanded changes in electronic form in 2009 (e-COPY 2009), and a third completely electronic edition in 2013 (e-UPEC Manual 2013). As in the earlier editions, UPEC Manual 2022 provides a useful guide for Teachers and Learners of undergraduate Pediatrics as they continually enhance their knowledge and clinical skills in tackling pediatric conditions. In addition, it helps Learners acquire a solid background as future general practitioners and pediatric specialists/subspecialists managing newborns to 19 year olds.

After identifying the UPEC Manual 2022 Project as a flagship of the PPS Board of Trustees, we relied on the dedication and commitment of the UPEC Committee and the invaluable inputs of previous and new contributing groups and experts in meeting our timetable despite the pandemic. We have completed the transition from a competency- to an outcome-based education (OBE) curriculum, adhering to the ten (10) learning outcomes of the Commission on Higher Education (CHED). While maintaining the three (3) Sections --- Core Modules, Disorders/Diseases/Problems, Selected Topics --- there were rearrangements here and there. Section One has eight (8) core modules, with the addition of Normal Newborn and the movement of previous (2013) Section Three selected topics, namely, Preventive Pediatrics, Community Pediatrics, Childhood Protection and Integrated Management of Childhood Illness. Section Two contains 16 organ system disorders/subspecialty conditions having removed Burns and Injuries from the 2013 list and incorporating it in Emergency Pediatrics. Nutritional Disorders became part of Section Two. The module on Fluids and Electrolytes is added as a selected topic in Section Three. Altogether, there are 30 OBE modules in this Manual.

The instructional designs (IDs) are so organized that they emphasize, among others, reasonable and attainable learning outcomes, must-know, must-do, recognize-and-refer conditions, teaching-learning activities adapted to current situations, and relevant evaluation methods. The pandemic has greatly influenced the shift from a purely traditional method of face-to-face interactions to the increasing use of digital platforms in the classroom and in the clinics. As importantly, these designs are meant to be medical school- and user-friendly.

There are other features of UPEC Manual 2022: (1) an expanded Glossary to describe new terminologies, and (2) a page on References to help the Manual user access extra information on the content of the IDs. Suffice it to say that the teaching modules and UPEC Q&A forum lectures accompanying this and the previous editions are still posted in the UPEC page of the PPS website www.pps.org.ph and can be visited anytime.

Again, we in the UPEC Committee can never thank enough our selfless contributors -- the PPS Council on Subspecialties and Sections and individual experts --- and Dean Melflor Atienza for her excellent review. PPS looks forward once more to a wide dissemination of UPEC Manual 2022 with the help of co-advocate agencies like the Professional Regulation Commission (PRC), CHED, Association of Philippine Medical Colleges Foundation (APMCF) and its member-medical schools. It is through a sustained close collaboration among these agencies in the area of pediatric education that we can contribute to improving the health of Filipino children and the future of our beloved country.

CARMELO A. ALFILER, MD
Chair, Undergraduate Pediatric Education Curriculum Committee

MESSAGE

Medical learners have been evolving through the years. There have also been major changes in pediatric training and learning and how we provide care to children. Major national and international trends have governed how pediatric education would be delivered. With the pandemic, many aspects of learning have further transformed and evolved. Digital and online technology has been the foundations of the innovations with teaching and learning activities for medical students during the ongoing pandemic.

The Philippine Pediatric Society has been at the forefront in the evolution of pediatric learning and training even with the challenges posed by the pandemic. The Undergraduate Pediatric Education Curriculum Committee has arisen through these challenges. Through this committee's vision and hard work, we are proud to offer to the medical community the UPEC Manual 2022 edition as a relevant, innovative and excellent resource to pediatric education in the undergraduate level. With a successful transition from a competency based to outcome-based education curriculum, this new curriculum for undergraduate pediatric education for medical schools would provide for the teachers and learners clarity, flexibility, significance and competitiveness in the national and global arena.

The Philippine Pediatric Society would like to express its gratitude to the formidable team that made this UPEC Manual 2022 edition come to reality. We thank Professor Carmelo A. Alfiler, the chair of the UPECC for his leadership, resilience and vision for this endeavor. We also thank Dean Melflor Atienza for her valuable work in the review of this manual. We express our gratitude to the committee's co-chair, Dr. Cecilia Alinea for her hard work and meticulousness. The PPS would also like to express its appreciation and thanksgiving to the committee members, the department chairs of the FEU-NRMF, MCU, UERMMMC, UPCM-PGH and UST for their valuable contributions. Sincerest gratitude too to the heads of the subspecialty societies and their members for their input and support.

We look forward to the valuable support of the Professional Regulation Commission (PRC), Commission on Higher Education, Association of Philippine Medical Colleges Foundation (APMCF) and its member-medical schools for the dissemination and adoption of this pediatric curriculum.

We hope that through this UPEC Manual 2022 edition, we would be able to achieve our objective to enhance the teaching and practice of Pediatrics in the undergraduate level and provide the strong foundation for our future general practitioners and pediatric specialists and subspecialists.

JOSELYN A. EUSEBIO, MD, FPPS, FPSDBP
President, Philippine Pediatric Society, Inc.

MESSAGE

In the regulation of the practice of medicine, the Professional Regulatory Board of Medicine supports any initiative that will improve learning of undergraduate medical students and maintain the standards of clinical practice in the field of pediatrics. The Professional Regulatory Board of Medicine congratulates the Philippine Pediatric Society in its untiring efforts to improve the instruction of pediatrics in the undergraduate medical education and henceforth, improve the practice of future doctors. The output of the Undergraduate Pediatric Education Curriculum Committee will redound to the improvement of patient care where the ultimate recipient is the patient, the Filipino child.

ELEANOR B. ALMORO, MD

Chairperson

Professional Regulatory Board of Medicine

MESSAGE

On behalf of the Commission on Higher Education (CHED), I would like to congratulate the Philippine Pediatric Society, Inc. (PPS) for publishing its PPS-Undergraduate Pediatric Education Curriculum (UPEC) Manual 2022 Edition.

The pandemic situation has highlighted urgent needs in the field of higher education. As we are charged with the duty to mold future professionals, the pandemic has underscored the need for health professionals that are adequately trained, sufficiently equipped and strategically distributed to provide much needed health services to as many people as possible. Fulfilling this need amid the pandemic situation will require reliance on scientific evidence, agility in leadership, and flexibility in approach.

So I commend the PPS for this initiative in order to ensure a strong foundation in knowledge and clinical skills for the future general practitioner and pediatric specialist/subspecialist. In a highly dynamic environment, we will need to be responsive to change in our respective institutions, but in our current situation, we will need to respond as one higher education sector. Together, we will respond to the pandemic, and together we will continue our duty in the New Normal, so that we will evolve together.

Together, let us work to develop quality and innovative research that can improve the lives of millions of Filipinos.

Congratulations and *Mabuhay!*

J. PROSPERO E. DE VERA III, DPA
Chairman
Commission on Higher Education

MESSAGE

To all our future educators and learners,

Warmest greetings to all!

"Education is the most powerful weapon which you can use to change the world."
-Nelson Mandela

As we prepare future doctors to address the health needs of the society and the community, and as we prepare them to the current and future health care delivery system that is aligned the 21st century practice of medicine, change is needed. It may require modifying the curriculum or altering the curriculum, changing the process of delivery and changing behaviors not only of the students, the teachers but also the society and our leaders. Redesigning the academic activities will greatly improve the educational experiences of our students to meet the eventual outcome we wanted them to achieve.

As Dr. Micheal Kidd, Professor of Primary Care Reform, Australia said, "we need a curriculum that is people /patient centered health care supported by evidence-based practice, digital health and an interdisciplinary care team."

Managing change is a complex, dynamic and challenging process and it occurs continuously around us at different pace. So as we transform the pediatric curriculum, to outcome - based approach I believe that the primary goal of Undergraduate Pediatric Education Curriculum (UPEC) Committee of the Philippine Pediatric Society is to provide a more relevant and innovative teaching, learning and assessment strategies that will result in acquisition of high quality knowledge and skills in Pediatrics for all our learners. Moreover, OBE being a performance -based approach encourages the students and the teachers to be both responsible and accountable for learning to meet the prerequisites for local and international accreditation.

On behalf of APMC I would like to express our sincerest gratitude to the Chair of UPECC, Dr. Carmelo A. Alfiler, the members and all the contributors and the PPS Inc Board of Trustees for their continuous dedication to the Filipino child. APMC with its committed, competent, and passionate leadership will assist all medical schools in the pursuit of excellence in medical education.

Let me end with this quotation - "The secret of change is to focus all of your energy not on fighting the old, but on building the new" –Socrates

Madeleine Grace M. Sosa

Prof. Madeleine Grace M. Sosa, MD, FPPS, FPNA, FCNSP, MSCE
APMC President 2021-2022

COUNCIL ON CONTINUING PROFESSIONAL DEVELOPMENT
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UST	CLARA R. RIVERA, MD

Function: To develop innovative and sustainable programs that will enhance the teaching and practice of Pediatrics in the undergraduate years ensuring a strong foundation in knowledge and clinical skills for the future general practitioner and pediatric specialist/subspecialist

Action Plans:
(1) To produce a core syllabus in undergraduate Pediatrics
(2) To introduce guidelines in the teaching and practice of Pediatrics in medical schools relevant to the Philippine setting
(3) To study other strategies/mechanisms by which Philippine Pediatrics can be promoted in a proactive manner as early as in the undergraduate years
(4) To monitor and evaluate periodically the effectiveness and relevance of the above activities

COMMITTEE OUTPUTS (2001-2022):

(1) A Curriculum for Undergraduate Pediatric Education for Philippine Medical Schools 2001
(2) Expanded e-copy of the above 2001 UPEC Manual, 2009
(3) Workshops on Innovative Teaching Strategies in Undergraduate Pediatrics, 2009-2012
(4) Teaching-Learning Modules on Breastfeeding, Pediatric NeuroExam, Growth & Development, Nutrition/Nutritional Disorders (hard and e-copies), 2010-2012
(5) Feedbacks on utilization of PPS-UPEC materials, 2010-2012
(6) Workshop on Revisiting 2001 PPS-Undergraduate Pediatric Education Curriculum, 2013
(7) Revised and Updated PPS e-UPEC Manual, 2013
(8) Teaching-Learning Modules on Art of History-Taking, Developmental & Behavioral Pediatrics, Interpretation of Urinalysis and Pediatric Infectious Skin Rashes
(9) 1st Q&A Forum: April 21, 2015, "Core Pediatric Topics: Enhancing the Teaching-Learning Environment through Relevant and Effective Strategies and Evaluation Methods"
(10) 2nd Q&A Forum: April 5, 2016, "Facilitating Case-Based Discussions in Undergraduate Pediatrics"
(11) 3rd Q&A Forum: April 4, 2017, "Assessing Undergraduate Trainees' Knowledge, Skills and Attitudes"
(12) 4th Q&A Forum: April 10, 2018, "Triangulation in OBE Assessment"
(13) 5th Q&A Forum: April 9, 2019, "Learning in the 21st Century: Blending Strategies for Better Outcomes"
(14) 6th Q&A (Virtual) Forum: June 24, 2021, "Virtual Core Competency Learning amidst the Pandemic: The Use of Telemedicine in Undergraduate Pediatrics"
(15) Revised and Updated PPS e-UPEC Manual 2022
(16) Continuing feedbacks on utilization of PPS e-UPEC materials

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INTRODUCTION

By MA. CECILIA D. ALINEA, MD, FPPS, MHPEd

OUTCOME-BASED UNDERGRADUATE PEDIATRIC EDUCATION CURRICULUM

More than a decade ago, the call for transformative scaling up of health professions education (HPE) was heralded by the World Health Organization (WHO) and concerned public health experts and educators to increase the "quantity, quality and relevance of future health care providers if they are to meet the health needs of individuals and populations in an equitable and efficient manner." (1,2,3) This was in response to the ongoing global health crisis, manifested by health care inequities, persistence of common and preventable diseases especially in developing countries, and a mismatch of professional competencies to patient and population priorities due to fragmentary, outdated and static curricula, producing ill-equipped graduates. (1,4) Through the years, reforms have taken place to ensure that HPE is better aligned and more responsive to population health needs, one of which was the adoption of outcome-based education (OBE) in medical institutions.

OBE is a learner-centered pedagogical approach that focuses on the product, what kind of doctor will be produced, rather than on the educational process. (5) Thus the curriculum framework, content, teaching-learning activities (TLA) and evaluation process are organized to prepare the physician to acquire specific educational outcomes that are responsive to an increasingly complex healthcare system upon graduation. These outcomes include clinical competence of the highest degree, social accountability, close collaboration with communities, excellence in research with global and local relevance, among others. (2)

In 2016, the Commission on Higher Education (CHED) issued policies, standards and guidelines (PSGs) for the Doctor of Medicine program, enumerating a set of desired program outcomes or core competencies (see Table 1) expected of a physician, regardless of the type of higher education institution (HEI) they graduated from. (6)

Table 1: Program outcomes specific to the Doctor of Medicine (MD) program (6)

PROGRAM OUTCOMES	OPERATIONAL DEFINITIONS
1. Demonstrate clinical competence	Competently manage clinical conditions of all patients in various settings
2. Communicate effectively	Convey information, in written and oral formats, across all types of audiences, venues and media in a manner that can be easily understood
3. Lead and manage health care teams	Initiate planning, organizing, implementation and evaluation of programs and health facilities Provide clear direction, inspiration, and motivation to the healthcare team/ community
4. Engage in research activities	Utilize current research evidence in decision making as practitioner, educator or researcher Participate in research activities
5. Collaborate within inter-professional teams	Effectively work in teams in managing patients, institutions, projects and similar situations

PROGRAM OUTCOMES	OPERATIONAL DEFINITIONS
6. Utilize systems-based approach to healthcare	Utilize systems-based approach in actual delivery of healthcare Network with relevant partners in solving general health problems
7. Engage in continuing personal and professional development	Update oneself through a variety of avenues for personal and professional growth to ensure quality healthcare and patient safety
8. Adhere to ethical, professional and legal standards	Adhere to national and international codes of conduct and legal standards that govern the profession
9. Demonstrate nationalism, internationalism and dedication to service	Demonstrate love for one's national heritage, respect for other cultures and commitment to service
10. Practice the principles of social accountability	Adhere to the principle of relevance, equity, quality and cost effectiveness in the delivery of healthcare to patients, families and communities

The 2013 edition of this manual has been revised to further underscore these outcomes that are covered by the course objectives of the various modules being taught in undergraduate pediatric medical education. An objective may encompass one or more of these outcomes, signifying that a simple goal such as providing treatment to a specific disorder requires a doctor to possess clinical competence, effective communication skills, social accountability, nationalism and dedication to service, the ability to engage in research activities, collaborate within inter-professional teams, utilize a systems-based approach to health care and adhere to ethical, professional and legal standards. Throughout this revised version, these outcomes are explicitly identified per module, with updated, relevant content, a menu of classroom and work-based TLAs that will effectively and efficiently facilitate the acquisition of these desired outcomes, and valid evaluation tools that will assess if such outcomes have been achieved upon graduation.

It is our fervent hope that with the alignment of the undergraduate pediatric education curriculum to the desired program outcomes set out by the national government through OBE, education, the health system and the community will be able to work, not in isolation, but as a united force that can bring about meaningful change in pediatric health care.

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GLOSSARY OF TERMS
TEACHING-LEARNING ACTIVITIES

In person: Face-to-face type of interaction

Virtual: Interaction that occurs with the use of computer technology over the internet

Small group discussion (SGD): Type of small group learning that allows for an interchange of ideas within the context of a group, usually under the direction of a presenter

Problem-based learning (PBL): Type of small group learning in which students learn about a subject by working in groups to solve an open-ended problem, usually following 3 phases: problem analysis phase, a period of self-directed learning and lastly, a reporting phase

One Minute Preceptorial (OMP): Type of preceptorial where the encounter will still take longer than a minute but the time spent is more efficiently used by following 5 microskills in clinical teaching: (1) commit to an aspect of a case, (2) probe for supporting evidence, (3) reinforce what was done well, (4) give guidance about errors and omissions, (5) teach a general principle

SNAPPS: Type of preceptorial which is an acronym that consists of 6 steps: (1) **S**ummarize briefly the history and PE findings, (2), **N**arrow the differential to 2-3 relevant possibilities, (3) **A**nalyze the differential, comparing and contrasting possibilities, (4) **P**robe the preceptor by asking questions about uncertainties, difficulties, or alternative approaches, (5) **P**lan management for the patient's medical issues, and (6) **S**elect a case-related issue for self-directed learning

Bedside teaching: Clinical teaching method that occurs with the actual patient as the focus

Project: A public product or presentation for an audience created by students that engages them in solving a real-world problem or answering a complex question

Telemedicine: A physician/ clinician in one location uses a telecommunications infrastructure to deliver care to a patient at a distant site

Hybrid learning: Approach where some students participate in person and some participate online, with instructors/facilitators teaching remote and in person learners at the same time using technology like video conferencing

Blended learning: Approach where instructors/ facilitators combine in person instruction with online learning activities, such that learners complete some components online and do others in person

Team-based learning: Type of small group learning where students apply conceptual knowledge in 3 steps: preparation (complete preparatory materials before class), in-class readiness assurance test (take test then discuss answers as a group, with feedback from instructor), and application-focused exercise (participate in exercises that help students learn how to apply and extend pre-learned and tested knowledge)

Self directed learning: Approach where students learn independently using 4 steps: initially assess readiness to learn, set learning goals, engage in learning activities to achieve goals, and evaluate what has been learned

EVALUATION

Blinded Patient Encounter (BPE): Assessment of a student based on direct observation of an encounter with a patient unknown to the student, to assess data gathering, hypothesis generation, problem solving abilities

Case Based Discussion (CBD): A method of clinical evaluation wherein two case records of recently seen patients selected and discussed to assess the student's clinical assessment, investigation, treatment choice and medical record keeping abilities

Clinical Encounter Cards (CEC): A method of assessment of students based on the clinical teacher's direct observation of eight patient encounters, with comments written on a 4" X 6" score cards

Direct Observation of Procedural Skills (DOPS): A series of 15-25-minute, structured evaluation of students' procedural skills using a 9-point rating scale

Formative evaluation: Low stakes type of evaluation conducted anytime during the instructional process to monitor student learning and provide ongoing feedback to staff and students

Key features exam: Evaluation tool that focuses on the critical or challenging decisions in the diagnosis and management of a clinical problem, and should contain a case vignette, followed by several questions specifically targeting key clinical decisions

Mini Clinical Evaluation Exam (Mini-CEX): A series of 15-25-minute structured evaluation of student's clinical competence using a 9-point rating scale, to assess medical interviewing skills, physical examination skills, humanistic qualities/professionalism, clinical judgment, counselling skills, organization/efficiency and overall clinical competence

Multi Source Feedback (MSF): Also known as 360-degree evaluation; a way of measuring and recording essential attributes, namely professionalism, patient management, self-management, diligence, communication skill, and teamwork skills, of a student using a 9-point rating scale assessed by peers, co-health workers, patients, and self

Objective Structured Clinical Examination (OSCE): An organizational framework for evaluating students, consisting of various stations testing different aspects of clinical competence, including history taking, focused physical examination, technical skills, interpretative skills, and patient education

Objective Structured Oral Examination (OSOE): Type of structured oral exam using a case for iterative discussion. An answer key has been prepared for scoring purposes

Portfolio: A collection of materials that record or provide evidence of learning or achievement during the student's rotation which may be presented to the faculty for review with a particular purpose in mind, usually to support evaluation reports

Summative evaluation: Type of evaluation that assesses student learning at the end of an instructional unit by comparing it against some standard or benchmark

INSTRUCTIONAL DESIGNS

SECTION ONE:
CORE MODULES

DATA GATHERING, RECORDING AND PRESENTATION

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Elicit an age-appropriate, organized and complete history (PO 1, 2, 8, 9, 10)	• Parts of a pediatric history: - General data - History of present illness - Review of systems - Past medical history - Family history and pedigree - Birth/maternal history, Menstrual history - Immunization history - Nutritional history - Developmental history - Psychosocial history - Environmental history • For adolescents: HEEADSSSS (Home, Education/Eating, Activities, Drugs, Sexuality, Spirituality, Suicide/depression, Safety) • Interviewing/questioning skills • Use of virtual platforms and discussion fora	• (Note: Select appropriate item/s from list/menu below) • In person and/or virtual: - Lecture-discussion - Film showing/instructional videos - Demonstration-return demonstration - Small group discussion (SGD) - Simulation (paper case, computer program, use of actor) • Actual patient care • Bedside teaching • Hybrid learning • Telemedicine	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-Clinical Exam (Mini-CEX) • Clinical skills lab Summative: • In-person and/or virtual: - Multiple choice questions (MCQ) - Key features exam - Clinical vignette - Objective structured clinical exam (OSCE) - Mini-CEX - Blind patient encounter (BPE) • Structured oral exam • Performance rating scale/rubric for: -Telemedicine -SGD -Return demo • Multi-source feedback (MSF or 360 feedback) • Professionalism rating scale • Patient feedback

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
2. Perform an age appropriate, thorough and complete physical examination with applicable assent (PO 1, 2, 8, 9, 10)	• **Parts of the physical examination (PE):** - **General appearance** - **Vital signs** - **Anthropometrics [weight, length/height, head circumference (HC), chest circumference (CC), abdominal circumference (AC), body mass index (BMI), mid upper arm circumference (MUAC)]** - **Use of WHO growth charts and interpretation of data** - **Head and neck** - **Chest (lungs and heart)** - **Abdomen and back** - **Genitourinary tract** - **Extremities** - **Integument** - **Neurologic exam** - **Tanner staging for adolescents** • **Proper technique in the use of basic instruments:** - **BP apparatus** - **otoscope** - **ophthalmoscope** - **stethoscope** - **weighing scale/stadiometer** - **thermometer** - **tape measure** • **Virtual demonstration of PE maneuvers/techniques**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
3. Construct a complete and organized written history and physical examination (PO 1, 2, 8, 9, 10)	• **Complete standardized data form** • **Written communication skills** • **Motor and technical skills** • **Integrity, honesty, professionalism, confidentiality, neatness, systematic synthesis**		
4. Effectively communicate with the family and patient during history taking and physical examination (PO 1, 2, 8, 9, 10)	• **Interview techniques** • **Communication skills** • **Interpersonal skills**		
5. Orally present complete and pertinent data clearly (PO 1, 2, 8)	• **Verbal communication skills** • **Interpersonal skills** • **Knowledge of pertinent data**		
6. Demonstrate the desired attitudes during history taking and physical examination (PO 1, 2, 8, 9, 10)	• **Desired attitudes** - **Compassion** - **Empathy** - **Rapport** - **Sensitivity** - **Responsibility** - **Professionalism** - **Friendliness** - **Respect for privacy** - **Patience** - **Gentleness** - **Non-judgmental attitude**		

PEDIATRIC PROCEDURES

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Discuss the steps, indications and contraindications of basic pediatric procedures (PO 1, 2, 8, 9, 10)	• Must know procedures: - Essential intrapartum and newborn care (EINC) - Complete blood count - NGT/OGT insertion - Suctioning - Gastric lavage - Collection of blood specimen - IV access - Lumbar puncture - Injections - Basic life support - Urine collection - Tourniquet test • Anatomy involved • Indications and contraindications for each pediatric procedure • Different steps in the performance of each procedure • Complications/hazards associated with each procedure • Post-procedural care	• (Note: Select appropriate item/s from list/menu below) • In person or virtual: - Lecture discussion - SGD - Instructional videos - Demonstration-return demonstration - Simulation - Preceptorials • Bedside teaching • Actual patient encounters	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX • Clinical skills lab Summative: • Written exam • OSCE • Direct observation of procedural skills (DOPS) • Performance rating scale for: - SGD - Preceptorials - Return demo

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
2. Properly prepare oneself, patient and patient's parent/ guardian for the procedure (PO 1, 2, 8, 9, 10)	• **Appropriate preparation for the procedure:** - **Explain the specific procedure to the parent/guardian/child** - **Obtain a signed informed consent from parents and assent from adolescents** - **Prepare the child psychologically for the procedure** - **Materials/equipment necessary for the procedure** - **Medication for analgesia** - **Proper positioning and restraint for the specific procedure**		
3. Perform the essential pediatric procedures under direct supervision (PO 1, 2, 8, 9, 10)	• **Specific steps for each procedure** • **Proper technique in performing procedure**		
4. Demonstrate the desired values/ attitudes in the conduct of the procedure (PO 1, 2, 8, 9, 10)	• **Values/attitudes:** - **Non-maleficence** - **Privacy** - **Beneficence** - **Confidentiality** - **Respect** - **Compassion** - **Empathy** • **Religious and cultural sensitivity**		
5. Display the proper communication skills before, during and after the procedure (PO 1, 2, 8, 9, 10)	• **Communication skills:** - **Probing** - **Reflective questioning** - **Facilitating** - **Summarizing**		

NORMAL NEWBORN

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Discuss the different legislations concerning the care of the newborn (PO 1, 2, 8, 9, 10)	• Executive Order 51 (Milk Code) • Republic Act 7600 (Rooming-In and Breastfeeding Act) • Republic Act 10028 (IRR of the Expanded Breastfeeding Promotion Act) • Administrative Order 2009-0025 (EINC Protocol/Unang Yakap) • Republic Act 9288 (Newborn Screening Act) • Republic Act 9709 (Universal Newborn Hearing Screening and Intervention Act) • Republic Act 11148 (First 1000 days Act)	• (Note: Select appropriate item/s from list/menu below) • In person and/or virtual: - Lecture-discussion - SGD/PBL - Role-play - Video presentation - Demonstration-return demonstration - Mothers' class (lay lecture for caregivers) • Actual patient encounter • Telemedicine • Bedside teaching	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX Summative: • Written exam • OSCE • Performance rating scale for: - SGD/PBL - Role-play - Telemedicine - Mothers' class
2. Recognize the factors that affect the outcome of the normal newborn (PO 1, 2)	• Natural history of normal pregnancy • Complete maternal history • Normal process of labor and delivery • Fetal vs. neonatal circulation • Transition to extrauterine environment • Presence of maternal and fetal risk factors		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
3. Perform accurate history taking and complete physical examination, including APGAR score and neurologic examination (PO 1, 2, 8, 9, 10)	• History taking: birth and maternal history, family medical history • PE techniques: - Inspection, palpation, percussion and auscultation - Normal physical findings - Differences in PE findings of post-term, term and preterm infants • Vital signs • Anthropometric measurements (HC, CC, AC, birth weight and length) • APGAR score and interpretation • Gestational aging (Ballard's score) • Classification of newborns according to the Lubchenco neonatal anthropometric chart • Use of the Fenton chart for preterm newborn • Normal physiologic variations in the newborn • Neurologic maneuvers - State of alertness/levels of alertness (sensorium) - Primitive reflexes - Motor tone - Sensory assessment		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
4. Provide comprehensive newborn care (PO 1, 2, 8, 9, 10)	• **Risk assessment: maternal, fetal and neonatal factors** • **Application of Essential Intrapartum and Newborn Care (EINC) protocol for all stable infants regardless of gestational age** • **Neonatal resuscitation** • **Cord care** • **Thermoregulation** • **Vitamin K prophylaxis** • **Eye prophylaxis** • **Immunizations (Hepatitis B, BCG)** • **Bathing beyond six hours of life** • **Kangaroo care** • **Lactation promotion and breastfeeding**		
5. Discuss in detail the evidence-based practice of Essential Intrapartum and Newborn Care (EINC) (PO 1, 2, 4, 8, 9, 10)	• **Core principles of EINC Evidence-based Standard Practices:** - **Immediate & thorough drying** - **Skin-to-skin contact** - **Properly-timed cord clamping** - **Non-separation of mother and baby for early initiation of breastfeeding**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
6. Recommend the performance of newborn screening procedures after 24 hours of life together (PO 1, 2, 8, 9, 10)	• **Concept, significance, procedures and interpretation of results of:** - **expanded newborn screening (ENBS)** - **hearing screening** - **critical congenital heart disease (CCHD) screening (not yet mandated by law)** - **red orange reflex screening (part of usual PE)**		
7. Provide proper newborn care instructions to parents and caregivers (PO 1, 2, 8, 9, 10)	• **Involvement of both parents and rest of the family** • **Kangaroo care** • **Breastfeeding:** - **Expression and storage of breastmilk** - **Proper attachment and positioning** - **Recognition and management of high-risk situations in breastfeeding** • **Cord care** • **Well baby visits and immunizations** • **Recognition of signs of illness/danger signs in the newborn** • **Health education**		

GROWTH

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Discuss physical growth and its significance in child health (PO 1, 2, 5)	• Definition of growth • Significance	• (Note: Select appropriate item/s from list/menu below) • Blended learning • Team-based learning • Actual patient encounter • In person and/or virtual: - Lecture - SGD - Preceptorials - Simulation - Demonstration-return demonstration - Case study - Video presentation - Journal club	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX Summative: • Written exam • OSCE • Reflection paper • Performance rating scale/ rubric for: - SGD - Preceptorials - Return-demo - Case study
2. Discuss specific growth patterns of children (PO 1, 2, 5)	• Organogenesis • Organ specific growth patterns: - Lymphoid - Neural - Somatic - Genital		
3. Perform accurate anthropometric measurements (PO 1, 2, 5, 7, 8, 9, 10)	• Components of anthropometric measurements: - Weight, length/height, HC, BMI, body surface area (BSA) - Other parameters: MUAC, skin fold thickness, upper segment/lower segment ratio-for short stature, waist/hip ratio-for obesity, bioelectric impedance analysis • WHO growth charts, plotting and interpretation of data • Communication and interpersonal skills • Values: professionalism, respect, confidentiality, empathy		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
4. Interpret values obtained from vital signs measurements (PO 1, 2, 8, 9, 10) **5. Explain the changing values in measures of function of different organ systems (PO 1, 2, 8, 9, 10)**	• **Reference values for age and sex** - **Blood pressure (BP)** - **Cardiac rate (CR)** - **Respiratory rate (RR)** - **Dentition** - **Hematologic (CBC, platelet)** - **Immunologic (IgG, A, M, D, E)** • **Interpretation of values obtained** • **Procedures for obtaining:** - **BP** - **CR** - **RR** • **Communication and interpersonal skills** • **Values: professionalism, respect, confidentiality, empathy**		

DEVELOPMENT

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Discuss development in childhood/adolescence and its significance (PO 1, 2, 5, 7, 8, 9, 10)	• Definition of development • Significance • Periods of development (specify age range for each period): - Prenatal - Neonatal- 0-28 days - Infancy- 1-12 months - Toddler- 1-2 years - Preschool- 3-5 years - School-age- 6-9 years - Adolescence (early, middle, late)- 10-18 years • Patterns of development: - Normal - Delay - Dissociated - Deviancy	• (Note: Select appropriate item/s from list/menu below) • Blended learning • Team-based learning • Actual patient encounter • In person and/or virtual: - Lecture • SGD • Preceptorials • Simulation • Demonstration-return demonstration • Case study • Video presentation • Journal club	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX Summative: • Written exam • OSCE • Reflection paper • Performance rating scale/rubric for: - SGD - Preceptorials - Return-demo - Case study
2. Explain the principles of development (PO 1, 2, 5, 7, 10)	• Basic principles of development		
3. Identify factors affecting development (PO 1, 2, 4, 5, 7, 8, 9, 10)	• Genetics • Environment • Nutrition • Experiences • Values: professionalism, respect, confidentiality, empathy		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
4. Explain the various developmental theories (PO 1, 2, 7, 8, 9, 10)	• **Theories of development:** - **Cognitive: Piaget** - **Psychosexual: Freud** - **Psychosocial: Erikson** - **Neurodevelopmental theory: Gesell** - **Moral development: Kohlberg** - **Learning: Vygotsky**		
5. Explain the developmental domains and milestones (PO 1, 2, 7, 8, 9, 10)	• **Developmental domains and milestones:** - **Motor: gross and fine** - **Language: receptive and expressive** - **Personal** - **Social** - **Cognitive** • **Values: Professionalism, confidentiality, respect, empathy**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
6. Perform developmental screening and surveillance (PO 1, 2, 7, 8, 9, 10)	• **Definition of developmental surveillance, screening and assessment** • **Developmental screening tools, including:** - **Parents Evaluation of Developmental Status (PEDS) Modified Checklist for Autism in Toddlers (M-CHAT)** - **Pediatric Symptom Checklist (PSC)** • **Red flags for developmental delay** • **Values: professionalism, respect, confidentiality, empathy**		
7. Advocate for doable ways on how to optimize child development (PO 1, 2, 3, 4, 5, 7, 8, 9, 10)	• **Statistics on developmental disorders** • **Government programs/budget supporting child development** • **Laws supporting development** • **Recommendations for preventive pediatric health care**		

NUTRITION

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
A. Discuss nutrition and its role in the growth and development of infants and children (PO 1, 2)	• Definition of nutrition and other related terms • Energy requirement and expenditure and factors that affect these. • Body composition and growth • Effects of nutrition on growth and development • Relationship of nutrition, immunity, and infection	• (Note: Select appropriate item/s from list/menu below) • In person and/or virtual: - Lectures - Case presentation/ reporting/ analysis - Video presentation - Role-play - SGD/PBL - Brainstorming - Workshop (for EINC) - Games • Bedside teaching • Self-directed learning • Hand-outs • Flip charts • Actual patient encounter • Clinical/community rotation • Telemedicine	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX • Feedback after exercises/drills Summative: • Written exam • OSCE • Structured practical exam • Reflection paper • Performance rating scale for: - Case presentation/reporting/ analysis - SGD - Role-play - Workshop output
A.1. Discuss the digestion, absorption, transport, storage, functions, and dietary sources of essential nutrients. (PO 1, 2)	• Carbohydrates • Lipids • Proteins • Vitamins • Electrolytes: sodium, potassium, calcium, phosphorus, magnesium, chloride • Minerals: iron, copper, zinc, chromium, selenium, manganese, fluoride, iodine, molybdenum • Water		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
A.2. Discuss the nutritional needs, guidelines and eating patterns at various pediatric age groups. (PO 1, 2)	• **Dietary Guidelines** • **Dietary Reference Intakes (DOST, 2015)** • **Recommended Energy and Nutrient Intakes (2001)** • **Nutritional guidelines (AAP, FNRI)** • **Pinggang Pinoy (DOH)** • **Dietary Prescription (NCP)** • **Eating patterns at various age groups:** - **Infancy** - **Toddlers** - **Preschool** - **School age** - **Adolescence**		
A.3. Discuss the importance of physical activity in achieving a state of well-being in children (PO 1, 2)	• **Appropriate physical activity at various pediatric age groups**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
B. Conduct a proper Pediatric Nutritional Status Assessment (PO 1, 2, 8, 9, 10)	• **Composition of Pediatric Nutritional Status Assessment:** - **Medical history** - **Nutritional history/Dietary assessment: 24-hour food recall, 3-day record, food diary, Intake observation, assessment of intake (quantitative, qualitative)** - **Dietary history: Appetite, composition of typical meal, food preference and aversion, food allergy/intolerance** - **Nutrition-focused PE**		
C. BREASTFEEDING **C.1. Discuss the structure of the breast (PO 1, 2)**	• **Anatomy of the female breast** • **External structure of the breast:** - **Nipple** - **Areola** - **Montgomery's tubercle** • **Internal structures of the breast:** - **Lactiferous ducts** - **Lactiferous sinuses** - **Milk ducts** - **Alveolus**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
C.2. Discuss the phases of lactation (PO 1, 2)	• **Endocrine control of lactation through three (3) phases:** - **Mammogenesis or mammary growth** - **Lactogenesis or initiation of milk secretion** - **Lactogenesis or maintenance of milk production** • **Autocrine control of lactation; influence of local factors acting on the breast** - **Milk prolactin reflex– prolactin hormone** • **Hormones in charge of supporting continuous milk production**		
C.3. Identify the composition of breastmilk (PO 1, 2)	• **Variations of breast milk (BM) composition:** - **Colostrum vs transitional vs mature BM** - **Term vs preterm BM** - **Foremilk vs hindmilk** • **Fresh vs stored vs pasteurized expressed BM** • **Biochemical composition of BM** • **Anti-infective properties** - **Immunoglobulin (IgA, IgG, IgM)** - **Bifidus factor** - **Lactoferrin** - **Macrophages and other cellular components** - **B-12 binding protein** - **Antiviral factor**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
C.4. List down the benefits of breast milk and breastfeeding (PO 1, 2)	• **Benefits to infant:** - **Cognitive development** - **Anti-infective properties** - **Safety** - **Enhanced immune response to immunization** - **Other benefits to the preterm infant** - **Prevention of adult-onset diseases** • **Benefits to the mother:** - **Prevention of obesity** - **Protection against cancers like ovarian and breast** - **Economical considerations** - **Psychological benefits** • **Benefits to the maternal-infant dyad:** - **Skin-to-skin contact** - **Maternal infant bonding**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
C.5. Demonstrate breastfeeding initiation using proper techniques (PO 1, 2, 8, 9, 10) **C.5.1. Identify common breastfeeding problems and solutions to these problems (PO 1, 2)**	• **Initiation of breastfeeding:** - **Importance of early initiation of breastfeeding** - **Proper attachment of infant to mother's breast** - **Monitoring of adequacy of intake** - **Different positions of breastfeeding: (cradle hold, reverse cradle hold, clutch hold, side lying position)** • **Common problems in breastfeeding:** - **Breast engorgement** - **Sore nipples** - **Mastitis** - **Breast abscess** - **Inverted/flat areola**		
C.6. Demonstrate the proper collection and storage of expressed breast milk (PO 1, 2, 8, 9, 10)	• **Different methods of breast milk collection:** - **Manual expression** - **Mechanical expression** - **Electric pumps** • **Storage techniques of breast milk:** - **Room temperature** - **Refrigerator** - **Freezer/thawing of stored breast milk**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
C.7. Identify the increased need for macro- and micronutrients of a lactating mother (PO 1, 2, 8, 9, 10)	• **Macro and micronutrients required for lactating mothers** • **Dietary prescription**		
C.8. Recognize the need for active breastfeeding promotion in the community/public health administration (PO 1, 2, 8, 9, 10) **C.8.1. Discuss the governing laws on Breastfeeding (PO 1, 2, 8, 9, 10)**	• **Mother-Baby Friendly Hospital Initiative** • **Maternal and Newborn, Child Health and Nutrition Policy of the DOH** • **EINC** • **Breastfeeding and Rooming-In Act (RA 7600)** • **Milk Code (EO 51)** • **Ten Steps to Successful Breastfeeding Policy** • **First 1000 Days Act** • **Expanded Exclusive Breastfeeding in the Workplace (RA 10028)**		
C.9. Discuss the contraindications to breastfeeding and breast milk (PO 1, 2, 8)	• **Contraindications to breastfeeding/breast milk:** - **Maternal contraindications: drug intake, medical conditions** - **Neonatal contraindication: Galactosemia**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Acceptable medical indications for breast milk assessment and substitution:** - **Breast milk substitutes (formulas):** **standard infant, follow-on, whole cow's milk, special formulas (soy-based, protein, hydrolysate, partially hydrolysed, extensively hydrolysed, amino acid)**		
C.10. Discuss the possible harm of using artificial milk substitutes **(PO 1, 2, 8, 9, 10)**	• **Intrinsic contamination of powdered milk substitutes** • **Dangers of bottle feeding** • **Evidence for increased morbidity and mortality among formula-fed infants**		
D. Discuss the art and science of introducing complementary foods **(PO 1, 2)**	• **Definition and four features of complementary food** • **Epidemiology of complementary food introduction** • **Guiding principles in the introduction of complementary foods among breastfed and non-breastfed infants (WHO and PAHO)** • **Methods of introducing age- and developmentally-appropriate food**		

PREVENTIVE PEDIATRICS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Provide anticipatory guidance to patients and parents on health maintenance practices in an ambulatory setting: a. Discuss anticipatory guidance packages according to age groups b. Discuss screening tests routinely used in health care maintenance visits (PO 1, 2, 4, 6, 8, 9, 10)	• Newborn, infant, childhood and adolescent anticipatory care (Bright futures, Bahaghari) • Screening tests performed during newborn period • Periodicity table for preventive care (PPS, AAP) • Serologic screening tests • Vision and hearing - Blood pressure - Dental hygiene - PPD screening test	• (Note: Select appropriate item/s from list/menu below) • In person and/or virtual: - Interactive Lecture - Conferences - Film showing - Role-play - Case-management - Preceptorials - Reporting - Simulation - Demonstration- return demo - Exercises/ drills • Actual patient encounter • Field trip (health center) • Bedside teaching • Telemedicine • Self-instructional materials/handouts/ manuals	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX • Clinical skills lab • Feedback after exercises/ drills Summative: • Written exam • OSCE • Structured practical exam • Structured oral exam • CBD • CEC • Performance rating scale/rubrics for: - Simulation - Case management - Preceptorials - Reporting - Role-play - Return demo - Telemedicine

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
2. Explain the significance of immunization in the prevention of common childhood diseases: **a. Discuss the principles of immunization based on immunologic, epidemiological and biochemical rationale** **b. Discuss the different childhood vaccines recommended at various age groups and situations:** **- Expanded Program of Immunization (EPI) of the Philippines (DOH)** **- Other pertinent vaccines not included in the EPI, but recommended by PPS/ PIDSP/ PVF/ DOH** **c. Demonstrate the proper way of administering the different vaccines in terms of dose and route of administration** **(PO 1, 2, 4, 6, 8, 9, 10)**	• **Principles of immunization and vaccination coverage** • **Indications/contraindications** • **Side effects and diverse events following immunization** • **Vaccination procedure** • **Different vaccines recommended for children and adolescents (EPI, PPS/PIDSP/PVF/DOH)** • **Patient education before and after vaccination**		-

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
3. Monitor the growth and development of newborns, children and adolescents using standardized tools **a. Interpret the WHO growth chart where weight, length/ height and head circumference are correctly plotted** **b. Compute for the body mass index (BMI) of older children and adolescents** **c. Determine the body surface area (BSA) as deemed appropriate** **d. Identify deviances in physical growth and development based on standard/nationally accepted values** **(PO 1, 2, 4, 6, 8, 9, 10)**	• **Prenatal and perinatal counseling** • **Anthropometric monitoring (weight, length/height, HC) using the WHO growth chart, MUAC and BMI** • **BP** • **Behavior and other developmental considerations (e.g. tantrums, toilet training, school readiness, play/toy/other socialization activities, gadget use, etc.)** • **Computation skills**		
4. Explain the nutritional requirements according to age group and aspects of nutrition **a. Discuss the role and benefits of breastfeeding in early nutrition and disease prevention** **b. Explain the importance of complementary feeding and micronutrient supplementation especially in infants and young children**	• **Nutrition in the first 1000 days** • **Food groups** • **Breastfeeding and artificial feeding** • **Weaning** • **Complementary feeding** • **Recommended diet for Filipino children (FNRI, PPS, etc.)** • **Physical activities**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
c. Expound on the nationally recommended diet per age group (FNRI, Pinggang Pinoy, etc.) **d. Emphasize the role of physical activities to achieve good nutrition** **(PO 1, 2, 4, 6, 8, 9, 10)**			
5. Obtain accurate, thorough, and relevant medical data **(PO 1, 2, 4, 6, 8, 9, 10)**	• **General data** • **Chief complaint** • **History of present illness** • **Past medical history** • **Family history** • **Personal and behavior profile** • **Birth and maternal history** • **Growth and development** • **Immunization history** • **Nutrition history** • **Interviewing skills** • **Communication/interpersonal skills**		
6. Interpret the epidemiologic features of common childhood injuries **(PO 1, 2, 4, 6, 8, 9, 10)**	• **Epidemiologic features of common injuries on the road, school/play area and home:** - **Traffic** - **Submersion** - **Falls** - **Burns (scald, flame, chemical, electrical, radiation)** - **Poisoning**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
7. Explain the relationship between the agent of injury, the host or injured child and the environment (PO 1, 2, 4, 6, 8, 9, 10)	• **Epidemiologic framework: The agent-host-environment model** • **Child development and injuries**		
8. Formulate preventive and promotive strategies against common injuries using different preventive models and approaches (PO 1, 2, 4, 6, 8, 9, 10)	• **Models of preventive strategies:** - **Injury matrix** - **Haddon's 10 generic strategies** - **Agent-host- environment interactive model** • **The "safety equation" model of risk factors and consequences: the "4Es:" Education, Enforcement (of the law and regulations), Engineering, Environment** • **Promotive strategies**		
9. Educate the patient/family/community on first aid and other feasible injury-prevention measures (PO 1, 2, 4, 6, 8, 9, 10)	• **Management of the injured child:** - **First aid** - **Primary care** - **Secondary care** - **Tertiary care**		
10. Assess the injured child using the Pediatric Trauma Scale and other scoring systems	• **Pediatric Trauma Scoring system** • **Glasgow Coma Scale** • **Indications for referral** • **Referral process**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
10.a. Interpret the scores in the various scoring Systems **10.b. Identify indications for referral to a trauma center** **(PO 1, 2, 4, 6, 8, 9, 10)**			
11. Perform first aid and other appropriate primary care measures (PO 1, 2, 4, 6, 8, 9, 10)	• **Airway** • **Breathing** • **Circulation** • **Disability** • **Exposure** • **Principles of application of first aid**		
12. Record accurate and complete information surrounding a particular injury (PO 1, 2, 4, 6, 8, 9, 10)	• **Proper documentation** • **Thoroughness** • **Accuracy**		
13. Discuss with the parents/ caregivers the status of the injured child (PO 1, 2, 4, 6, 8, 9, 10)	• **Communication skills** • **Concern, empathy and sensitivity to the parents and families of the injured child**		
14. Report the incident to the proper medico- legal authorities (PO 1, 2, 4, 6, 8, 9, 10)	• **Injury surveillance** • **Steps in reporting to proper authorities** • **Concern for the safety, comfort and overall welfare of the patient**		

COMMUNITY PEDIATRICS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Identify the social determinants of health in a community (PO 1, 2, 3, 4, 5, 6, 7, 10)	• Relevant data indicative of the child health situation in the community • Relevant factors when asked to examine a hypothetical situation • Tour of the community • Purpose and importance of situational analysis • Ecologic concepts of health and disease data categories in the health areas: - Demographic - Health status - Ecologic data - Health resources - Health policy data • Review of sources and methods of data collection, organization and presentation of data • Brief overview of vital and health statistics • Analysis of health seeking behavior • Appraisal of given information • Essentials in the preparation of the report	• (Note: Select appropriate item/s from list/menu below) • Blended learning • Community-guided tour with field study • Community/ institution visit • Area mapping • Project • Hand-outs • Telemedicine • In person and/or virtual: Large group learning - Interactive lecture- discussion - Video presentation - Seminar- workshop - Case reporting/presentation - Case studies - Demonstration-return demonstration (Disaster drills) Small group learning - Role play - SGD - Preceptorials - Hands-on exercises/practice sessions - Video tape sessions and critiquing of history - Practice interview on classmate or actual patients	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX Summative: • Written exam • Performance rating scale/rubric for: - return demo - SGD - Preceptorials - Case presentation/ reporting - Case studies - Project • Reflection paper • Written report • OSCE • OSOE • OSPE

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
2. Identify locally available resources to solve problems identified and point out possible obstacles when using these resources (PO 2, 5, 6, 7, 10)	• **How to locate resources and types of resources in the community (NGO, Church, health center, DOH, NSO, school, hospital, market place, police outpost)**		
3. Formulate a diagnosis and management plan for common childhood complaints, and diseases unique to a particular community **3.a. List question series to explore specific complaint** **3.b. Ask follow up questions to verify given history** **3.c. Determine diagnostic considerations and therapeutic options after completion the history** **3.d. Administer first aid/ basic treatment, highlighting the Integrated Management of Childhood Illness (IMCI)** **(PO 1, 2, 3, 5, 6, 7, 8, 10)**	• **Common childhood diseases in the community** • **Major features of history of the patients/health situations** • **Common diagnostic tests** • **Principles of first aid/basic intervention** • **Integrated Management of Childhood Illness (IMCI) diagnosis and management protocol** **a. Principles of IMCI** **b. Assessment of a sick infant/child according to the IMCI classification in the following age groups:** **b.1. 0- 2 months** **b.2. 2 months- 5 years** **c. Management plan for the sick child and young infant according to the IMCI approach**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
4. Demonstrate counseling and communication skills to mothers and caregivers (PO 1, 2, 6, 8, 9, 10)	• **Principles of counseling and good communication** • **Steps in counseling/health education**		
5. Refer complex cases for prompt intervention **5.a. Identify sources of assistance and service desired** **5.b. Complete referral forms after identifying problems faced** **5.c. Explain necessity of referral including arrangements to be made with the family of the patient and referral center** **(PO 1, 2, 3, 5, 6, 7, 8, 10)**	• **Assessing the need for referral and service delivery network** • **Referral possibilities and procedures** • **Reasons/indications for referral** • **Communication with professionals from other disciplines and families**		
6. Discuss interpersonal violence, child abuse and neglect as a public health problem and an ethical concern **6.a. primary, secondary & tertiary prevention** **6.b. diagnosis through appropriate medical history, physical findings and laboratory exams when warranted** **6.c. micro and macro effects** **6.d. legal and ethical implications** **(PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Epidemiology and definitions of interpersonal violence, child abuse and neglect:** - **Human behavior** - **Barriers to care** - **Society myths** • **Prevention:** - **Strategies for primary, secondary, tertiary prevention of interpersonal voice, child abuse and neglect.** - **Risk and protective factors** - **Importance of the interaction between the child and the environment**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- **Anticipatory guidance during well child visits** - **Resources and programs available in the community** - **Programs & policies of government (e.g., breastfeeding, parenting, conditional cash transfer)** • **Diagnosis:** - **Appropriate history from child and family** - **Diverse clinical presentations, signs and symptoms** - **Laboratory examinations when warranted** - **Recording and documentation of pertinent findings** • **Micro and macro effects:** - **Neurobiological effects of abuse** - **Connection between violence, poverty, substance abuse, crime educational attainment and health later in life** • **Legal and ethical implications:** - **Philippine laws on domestic violence and child protection** - **Confidentiality** - **Proper documentation** - **Reporting responsibilities** - **Role of the physician** - **Referral system**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
7. Participate in health promotion activities on the following sample topics: **7.a. Child care and nutrition** **7.b. Basic sanitation and personal hygiene** **7.c. Accident protection and safety promotion** **7.d. Vegetable gardening** **7.e. Recognition of common infections** **7.f Immunization** **(PO 1, 2, 3, 4, 5, 6, 7, 9, 10)**	• **Brief overview of health education** • **Communication process** • **Principles and methods** • **Selection and use of audiovisual aids** • **Steps in behavioral change**		
8. Design a work plan to address common community child health problems **8.a Formulate clear objectives** **8.b List all activities to be carried out, specifying dates of completion and how they will be accomplished** **8.c List required resources and who will perform the activities** **(PO 1, 2, 3, 5, 6, 7, 8, 9, 10)**	• **Steps in preparing the work plan** • **Purpose and activities** • **Resources required** • **Problems anticipated**		
9. Demonstrate preparedness in responding to disasters **(PO 1, 2, 3, 5, 6, 7, 8, 9, 10)**	• **Nature and kind of disasters** • **Common issues encountered** • **Disaster preparedness program**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
10. Create an evaluation plan for a specific activity to assess its effects/impact on a target (PO 1, 2, 3, 4, 5, 6, 7, 9, 10)	• **Reasons for performing a post-activity evaluation** • **Steps in evaluating** • **Methods of evaluation** • **Process and outcome evaluation**		
11. Provide essential training to health workers that will serve as Primary Health Care teachers **Inculcate values formation to children and youth the value of early responsibility, respect for elders, love of God, family and neighbor (PO 1, 2, 3, 5, 6, 7, 8, 9, 10)**	• **Eight (8) Elements of Primary Health Care** • **Pillars of Primary Health Care** • **Role modeling** • **Critical values that are important in the community**		
12. Educate vulnerable groups on available support system (PO 1, 2, 3, 5, 6, 7, 8, 10)	• **Strengthening of family ties and overseas foreign workers (OFWs)** • **Counseling information** • **Children at risk (e.g. children caught in arms conflict, indigenous people, street children, etc.)** • **Available public (Local Government Unit [LGU]) and private support systems and the services provided**		

SECTION TWO: DISORDERS/DISEASES/PROBLEMS

DISORDERS OF ALLERGY AND IMMUNOLOGY

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the global and local impact of allergic diseases on children and adolescents and their long term effects (PO 1, 2, 4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture-discussion** - **SGD/ PBL** - **Case discussion** - **Preceptorials** - **Conferences** • **Actual patient encounter** • **Bedside teaching** • **Independent study** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **OSCE** • **Performance rating scale/rubric for:** **- SGD/PBL** **- Case discussion** **- Preceptorials** **- Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Discuss the principles of allergic disorders (PO 1, 2)**	• **Immune dysregulation: TH1, TH2, TH3 cells** • **Concept of allergen sensitization** • **Types of hypersensitivity state (Gell & Coombs Classification):** - **Type I (IgE-mediated reaction)** - **Type II (Antibody-dependent cell cytotoxicity)** - **Type III (Complement-mediated)** - **Type IV (Delayed)**		
3. Discuss the common allergic triggers (PO 1, 2)	• **Common allergic triggers:** • **House dust mites** • **Pollen grains** • **Molds** • **Food** • **Drugs** • **Animal dander**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
4. Explain the allergic march and its comorbid allergic disorders (PO 1, 2)	• **Mechanisms of the allergic march** • **Co-morbid conditions:** - **Bronchial asthma** - **Otitis media** - **Sinusitis** - **Allergic conjunctivitis**		
5. Recognize allergic disorders or adverse drug/food reactions based on clinical presentation (PO 1, 2)	• **Clinical presentation of allergic disorders:** - **Pruritus** - **Skin rashes/eruptions** - **Sneezing and/or runny nose** - **Wheeze** - **Recurrent/chronic cough** - **Persistent/recurrent diarrhea/vomiting** - **Hematochezia** • **Common allergic disorders/adverse reactions:** - **Adverse drug reaction** - **Adverse food reaction** - **Allergic rhinitis/sinusitis** - **Atopic dermatitis** - **Bronchial asthma** - **Urticaria** - **Anaphylaxis** - **Allergic contact dermatitis**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **PHYSICAL EXAMINATION** **DIAGNOSIS** **6. Determine the probable cause of the allergic reaction through appropriate diagnostic work-up (PO 1, 2, 8, 9, 10)**	• **Role of history and PE** • **Principle, rationale, and indications of each ancillary test** - **Blood test: CBC, serology** - **Imaging: chest X-ray PA and lateral views, paranasal sinus X-ray and/or CT scan** - **Others: tests for eosinophilia (nasal, bronchial and gastrointestinal secretions, biopsy), serum IgE (total, in-vitro specific test), peak expiratory flow rate, blood gas analysis** • **Goldman's criteria for the diagnosis of food allergy (e.g. food challenge test)** • **Indications and principles of allergy skin test**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **7. Explain the role of proper health education in the prevention in allergic diseases (PO 1, 2, 4, 5, 8, 9, 10)**	• **Epigenetics of allergic diseases (gene-environment interaction)** • **Risk factors for allergic diseases** • **Identifying high risk atopic individuals** • **Principles of allergy prevention (primary, secondary and tertiary prevention)** • **Role of clinical/immunologic methods in detecting sensitization** • **Early warning signs to prevent allergic diathesis and how to prevent progression and complications** • **Control measures to attain a normal life**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
8. Explain the basic principle of treatment: **8.a. Avoidance** **8.b. Pharmacologic therapy** **8.c. Aeroallergen immunotherapy** **(PO 1, 2)**	• **Risk factors and triggers** • **Role of environment in disease exacerbation** • **Avoidance of triggers through specific and non-specific measures** • **Principle and rationale of the different therapeutic modalities** • **First-line pharmacologic agents** • **Pharmacodynamics and pharmacokinetics** • **Pharmacotherapeutics** • **Adverse effects** • **Immunotherapy** - **Mechanism** - **Indications** - **Manner of administration, onset of action, duration of treatment** - **Possible adverse effects, prevention/treatment of complications** • **Rechallenge and desensitization**		
9. Formulate a treatment plan for the common allergic disorders (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **Management using a multi-pronged approach: avoidance measures, pharmacotherapy, immunotherapy, patient education**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Common allergic diseases: - Allergic contact dermatitis - Allergic rhinitis - Anaphylaxis - Atopic dermatitis - Bronchial asthma including cough variant asthma - Drug allergy - Food allergy including cow's milk allergy - Urticaria		
10. Recognize the presence of complications, their treatment, prevention and need for referral (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Common complications: - Secondary infections: viral, bacterial, fungal - Pneumothorax - Cardiorespiratory failure • Anatomic, physiologic and pathophysiologic basis of the above complications • Basic management of complications • Indications for referral		
11. Clinically diagnose common allergic emergencies 11.a. Anaphylaxis 11.b. Bronchial asthma in severe exacerbation (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Definition and criteria for diagnosis of: - Anaphylaxis - Bronchial asthma in severe exacerbation • Causes, pathophysiology, clinical presentation, basic management, indications for admission and referral		

DISORDERS OF BONES AND JOINTS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of musculoskeletal disorders and their long term effects on growing children (PO 1,2,4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture-discussion** - **Instructional video** - **SGD/ PBL** - **Demonstration- return demonstration** - **Case discussion** • **Self-instructional materials** • **Actual patient encounter** • **Bedside teaching** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative** • **Written exam** • **Oral exam** • **OSCE** • **Performance rating scale for:** **- SGD/ PBL** **- Return demo** **- Case discussion** **- Telemedicine**
BASIC SCIENCE CORRELATION **2. Clinically correlate anatomy and physiology with the development of musculoskeletal disorders (PO 1)**	• **Anatomy** • **Physiology**		
CLINICAL CORRELATION **3. Discuss the common musculoskeletal disorders based on etiology, pathophysiology and clinical presentation (PO 1,2,8,9,10)**	• **Etiology** • **Pathophysiology** • **Clinical presentations of common musculoskeletal disorders in children:** **-Limp: DDH, Perthe's disease, slipped capital femoral epiphyses, transient synovitis, trauma**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	-Congenital anomalies: clubfoot, torticollis, calcaneo valgus feet, Streeter's dysplasia, poly/syndactyly, DDH, arthrogryposis -Acute pain/ swelling in extremities: osteomyelitis, septic arthritis, TB arthritis, traumatic and pathologic fractures (osteogenesis imperfecta), hemarthrosis due to blood dyscrasia -Bony growths/ masses in extremities: Osteosarcoma, Ewing's sarcoma, Rhabdomyosarcoma, Osteochondroma, Osteoid osteoma, Soft tissue sarcomas -Developmental pathologies: Genu varum (Blount's disease), Genu valgum (knock knees), scoliosis, intoeing, flatfeet - Neurologic/ Neurosurgical condition: Cerebral palsy, spinal dysraphisms, myelomeningocoele		
HISTORY TAKING 4. Elicit an accurate and comprehensive history focusing on the musculoskeletal system (PO1, 2, 8,9,10)	• Complete medical and neurologic history- acute pain/ swelling/ masses in extremities/ bones, neurologic changes (gait) • Birth history- presence of congenital anomalies • Developmental history- developmental pathologies		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **5. Perform a musculoskeletal exam on a pediatric patient presenting with a musculoskeletal problem (PO 1, 2, 8, 9, 10)**	• **Normal and abnormal gait** • **Steps in performing PE with attention to range of joint motion, contractures, limb lengths and special exams e.g. Ortolani, Barlow's, Allis, Klisik**		
DIAGNOSIS **DIAGNOSTIC TESTING** **6. Diagnose a child with a musculoskeletal disorder based on history and PE findings (PO 1, 2, 8, 9, 10)**	• **Salient history and PE findings** • **Laboratory tests** • **Imaging: X-ray, ultrasound, CT scan, MRI**		
MANAGEMENT **7. Explain the rationale and principles of management of musculoskeletal disorders** **a. Recognize complications and indications for referral** **b. Discuss curative, rehabilitative, preventive and promotive care** **(PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Medical management: pharmacologic (analgesic/ anti-inflammatory) and non-pharmacologic agents** • **Supportive management: use of assistive ambulatory devices, bracing or immobilization devices, family/ group support** • **Complications** • **Referral to multidisciplinary team**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Limp: Assistive mobilization devices, bracing, pharmacologic agents like analgesics, family support** • **Congenital deformities: surgical intervention, physical rehabilitation** • **Acute pain/ swelling in extremities: pharmacologic and non-pharmacologic agents, referral for surgical intervention** • **Bony growths/ masses in extremities: medical (chemotherapy) and surgical intervention, radiotherapy, supportive management** • **Developmental pathologies: initial medical and surgical management, referral to multidisciplinary team (orthopedics, rehabilitation medicine, pediatrics, genetics, radiology)** • **Neurologic/ Neurosurgical conditions: multidisciplinary approach**		

CARDIOVASCULAR DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of cardiovascular disorders and their long term effects on children adolescents (PO 1, 2, 4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture- discussion** - **Video presentation** - **SGD/PBL** - **Demonstration- return demonstration** - **Case conference** - **Preceptorials** • **Bedside teaching** • **Ward rounds** • **Actual patient encounter**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative** • **Written exam** • **Practical exam** • **Graded oral recitation** • **Written report** • **Performance rating scale/rubric for:** **- SGD/PBL** **- Preceptorials** **- Return demo** • **Oral exam** • **OSCE** • **CEC**
BASIC SCIENCE CORRELATION **2. Explain the anatomic, physiologic and pathophysiologic basis of the presenting cardiac complaint/problem (PO 1, 2)**	• **Anatomy and physiology of the cardiovascular system: fetal and postnatal hemodynamics** • **Pathophysiology of complaint/problem**		
CLINICAL CORRELATION **3. Enumerate the clinical presentation of cardiovascular diseases (PO 1, 2)**	• **Murmur: physiologic and pathologic** • **Cyanosis: central and peripheral** • **Difficulty of breathing** • **Congestive heart failure (CHF)** • **Hypoxic spell** • **Arrhythmias** • **Chest pain** • **Systemic hypertension** • **Cardiomegaly** • **Syncope** • **Dysmorphic features** • **Failure to thrive**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **4. Elicit a complete history which focuses on the character and circumstances surrounding the complaint (PO 1, 2, 8, 9, 10)**	• **Complete history of the patient, focus on the cardiovascular complaint/problem** • **Include prenatal/maternal history and family history** • **Communication skills** • **Interpersonal skills** • **Respect for patient's privacy confidentiality** • **Thoroughness**		
PHYSICAL EXAMINATION **5. Perform a complete and accurate physical examination including a systematic cardiac examination using inspection, palpation, percussion and auscultation (PO 1, 2, 8, 9, 10)**	• **Complete PE and cardiac evaluation including vital signs, BP in all extremities and 02 saturation,** • **Anthropometric measurements: body weight, height (length), BMI with Z scores** • **Cyanosis, dysmorphic features** • **Chest and lungs** • **Cardiac examination: chest symmetry, point of maximal impulse and location, heave, thrill, heart sounds and murmur, rhythm and rate** • **Abdomen: ascites, hepatomegaly**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Extremities: cyanotic nail beds, pulses, capillary refill time, + clubbing of nailbeds, edema, pulses (upper and lower extremities) • Communication skills • Consideration for the patient's safety, comfort, and privacy		
6. Determine the most likely abnormality and severity based on information gathered (PO 1, 2, 8, 9, 10)	• Correlation of pertinent findings with history and PE according to their knowledge of the anatomy and physiology of the cardiovascular system • Correlation of signs and symptoms presented and their severity with the pathophysiology of the cardiac disease		
DIFFERENTIAL DIAGNOSIS 7. List the logical differential diagnoses based on gathered data (PO 1, 2, 8, 9, 10)	• Differential diagnosis based on history, PE findings and basic diagnostics such as electrocardiogram (ECG) and chest X-ray: a. Congenital heart disease - Acyanotic: volume overloading lesions or pressure overloading lesions - Cyanotic: Increased pulmonary blood flow, decreased pulmonary vascularity		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	b. Acquired heart disease - **Rheumatic fever (RF) and rheumatic heart disease (RHD)** - **Infective endocarditis** - **Myocardial disease** - **Pericardial disease** - **Kawasaki disease** **c. Arrhythmias** **d. Heart failure** **e. Metabolic syndrome** - **Approach to differential diagnoses** - **Primary diagnosis and bases** - **Functional classification of the disease**		
DIAGNOSTIC TESTING **8. Choose the appropriate diagnostic examinations to confirm the diagnosis (PO 1, 2, 8, 9, 10)**	• **Indications, availability, reliability of diagnostic examinations** **a. Blood examinations:** - **CBC** - **Arterial/venous blood gas** - **Serum electrolytes (Na, K, Ca, Mg)** - **Acute phase reactants: ESR, CRP** - **ASO titer, Anti DNAse B** - **Cardiac enzymes, BNP** - **Blood culture (2x)**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	b. Imaging studies: - **Chest radiograph (PAL views)** - **ECG 15 leads with rhythm strip, 24-hour** - **Holter monitoring (ambulatory)** - **Echocardiography: 2-D echo with color flow Doppler studies, Transesophageal echocardiogram (TEE** - **Cardiac catheterization** - **Magnetic resonance imaging (MRI)** - **Angiocardiography** - **Treadmill Exercise Test** - **Written informed consent containing:** **a. Role in the diagnosis and treatment** **b. Necessity of the procedures** **c. Cost–risk-benefit evaluation** **d. Psychological support to the patient and family** **e. Importance and principles of asepsis in the collection of biological specimen**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	f. Interpretation of the results of laboratory tests done **g. Correlation of laboratory test results with the clinical data, differential diagnosis and natural course of the illness** **h. Adverse clinical outcome of diagnostic tests**		
DIAGNOSIS **9. Establish the diagnosis using evidence (PO 1, 2, 4, 8, 9, 10)**	• **Diagnostic criteria for common cardiovascular diseases**		
MANAGEMENT **10. Discuss a plan of treatment for emergency care, definitive care, and long-term/rehabilitative care for various cardiovascular diseases (PO 1,2,4, 5, 6, 8,9,10)**	• **Relevance, availability, socio-economic factors, rehabilitative care and schedule of follow-up of common cardiovascular diseases** • **Indications for hospitalization and emergency care of patients with cardiovascular problem/s:** - **Heart failure** - **Arrhythmia** - **Hypercyanotic attacks** - **Sudden death** • **Equipment, materials and medications for resuscitation**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Steps in emergency care** - **BLS** - **Pediatric Advanced Life Support (PALS)** - **Cardiovascular resuscitation techniques and stabilization measures including cardioversion** • **Appropriate fluid management** • **Palliative procedures** • **Surgical procedures** • **Catheter device procedures** • **Therapeutic agents for symptomatic relief of CHF, RF, RHD, pulmonary hypertension** • **Indications for limitation in physical activities, sports, and employment** • **List of cardiovascular diseases with tendency to chronicity and requiring long-term follow-up: grown–ups with CHD (operated and unoperated), RHD, pulmonary hypertension** • **Specific therapeutic agents for long-term care of patients with cardiovascular diseases** • **Specific definitive care of patients with cardiovascular diseases**		

CRITICAL CARE PROBLEMS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of critical illness on children and adolescents in terms of its effect on growth, development and future productivity (PO 1, 2, 4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lectures** - **SGD/ PBL** - **Module simulation** - **Case presentation** - **Demonstration-return demonstration** - **Preceptorials** - **Lay forum** • **Bedside teaching**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini CEX** **Summative:** • **Written exam** • **OSCE** • **Performance rating scale/rubric for:** **- SGD/PBL** **- Case presentation** **- Preceptorial** **- Return demo**
HISTORY TAKING **PHYSICAL EXAMINATION** **DIAGNOSIS** **2. Clinically diagnose common emergency problems (PO 1, 2, 5, 8, 9, 10)**	• **History** • **Physical examination** • **Clinical presentation of common emergency problems:** **a. Shock** - **Hypovolemic** - **Septic** - **Distributive** - **Cardiogenic** - **Obstructive** **b. Respiratory failure** **c. Traumatic brain injury** **d. Submersion injury** **e. Burns**		
DIAGNOSTIC TESTING **3. Determine the probable cause through appropriate work-ups (PO 1, 2, 4, 5, 8, 9, 10)**	• **End-organ function tests: liver function, kidney function** • **Imaging modalities: chest X-ray, CT scan, ultrasound, 2D echo, MRI** - **Shock** - **Respiratory failure** - **Traumatic brain injury** - **Submersion injury** - **Burns**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **4. Institute advanced life support management** **4.a. Basics of PALS** **4.b. Administration of critical drugs** **(PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Principles of PALS** - **ABCDE of resuscitation:** **a. A-Airway: clear; maintainable; unmaintainable without intubation** **b. B-Breathing: respiratory rate, effort, air entry, oxygen saturation** **c. C-Circulation: BP, central and peripheral pulses, heart rate, capillary refill time (CRT)** **d. D-Disability: Neuroprotective strategies, pupillary reflex and size, decompressants, Hgt/CBG** **e. E-Exposure: temperature, rashes, bruises** - **Fluid management: fluid resuscitation; parkland formula for burns** - **Drugs/medications:** **List of critical drugs to administer (indication, dose, route, frequency, side/adverse effects, etc.) e.g. inotropes, vasopressors, antibiotics**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
5. Identify the presence of common complications (PO 1, 2, 4, 5, 8, 9, 10)	• **Clinical presentation and basic treatment of the following complications:** - **Disseminated intravascular coagulation (DIC)** - **Pediatric acute respiratory distress syndrome (PARDS)** - **Multiple organ dysfunction syndrome (MODS)** - **Multisystemic inflammatory syndrome in childhood (MIS-C)**		
6. Provide proper health education (PO 1, 2, 4, 5, 8, 9, 10)	• **Prevention of disease** • **Public education and awareness** • **Teaching BLS to lay people, including automated external defibrillator (AED)**		
7. Provide basic post-ICU care (step-down care) (PO 1, 2, 4, 5, 8, 9, 10)	• **PALS 2020 recommendations:** - **Neurologic/cognitive complications**		

DERMATOLOGICAL PROBLEMS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the physical, mental, psychosocial and economic impact of skin lesions on children and their families (PO 1, 2, 4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates** • **Physical, mental, psychosocial and economic impact on children and their families**	• **(Note: Select appropriate item/s in list/menu below)** • **In person and/or virtual:** - **Lectures** - **SGD/PBL** - **Preceptorials** - **Demonstration- return demonstration** - **Seminar- workshop (skills training)** • **Independent study** • **Telemedicine** • **Actual patient encounters** • **Bedside teaching** • **OPD rotation** • **Reading assignment with follow-up discussions**	• **(Note: Select appropriate item/s in list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **OSCE** • **Performance rating scale for** - **SGD/PBL** - **Preceptorials** - **Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Discuss the most common skin disorders seen in children and adolescents based on the type of skin lesion and their associated features (PO 1, 2, 8, 9, 10)**	• **Layers of the skin** • **Types of skin on human body** • **Descriptive terminology for skin lesions:** - **Primary lesions: macules, papules, patch, plaque, vesicles, bulla, pustule, nodule, tumor, wheal** - **Secondary lesions: crust, scales, lichenification, erosion, ulcer, fissure, excoriation, atrophy, scar, hyper- or hypopigmentation, ulcer** - **Other conditions: atrophy, burrow, comedone, erythema, petechia, poikiloderma, purpura, sclerosis, exanthem, enanthem**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Most common skin lesions in children and adolescents:** - **Neonatal & inherited skin disorders** - **Cutaneous defects** - **Vascular disorders** - **Hyperpigmentation** - **Hypopigmentation** - **Eczematous disorders** - **Papulosquamous disorders** - **Vesicobullous disease** - **Xerosis** - **Cutaneous bacterial infections** - **Cutaneous viral infections** - **Cutaneous fungal infections** - **Cutaneous infestations** - **Acne** - **Hair and nail disorders**		
HISTORY TAKING **3. Construct a complete history with emphasis on describing the initial dermatological complaint, and the development & progression of the cutaneous problem (PO 1, 2, 8, 9, 10)**	• **History taking:** - **Dermatologic features** - **Associated signs and symptoms** - **Environmental history** - **Family history**		
PHYSICAL EXAMINATION **4. Perform a complete PE with emphasis on dermatological examination (PO 1, 2, 8, 9, 10)**	• **Complete PE:** - **Skin (characteristics of skin lesion, distribution)** - **Neurologic exam**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSTIC TESTING **5. Select the appropriate diagnostic examinations for cutaneous problems (PO 1, 2, 8, 9, 10)**	• **Diagnostic tests for:** - **Bacterial infections: gram stain & culture** - **Viral diseases: light microscopy (Tzanck smear), PCR, ELISA, viral cultures** - **Mycotic diseases: light microscopy (KOH smear), Wood's light exam, fungal culture** - **Immune-mediated skin diseases: direct and indirect immunoflourescence microscopy** - **Other common cutaneous problems: skin biopsy, skin scrappings for scabies, light microscopy exam for hair shaft abnormalities**		
6. Interpret accurately the results of the tests & procedures (PO 1, 2, 8, 9, 10)			
DIAGNOSIS **7. Propose a logical diagnosis and differential diagnoses based on data gathered (PO 1,2,8,9,10)**	• **Focused dermatologic history and physical examination** • **Differential diagnosis based on data gathered** • **Results of diagnostic tests and their interpretations**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **8. Discuss the principles & rationale for management of common pediatric dermatological problems based on current evidence-based literature** **8.a. Discuss the indications, appropriate dose, duration of use, adverse/side effects of basic therapeutic agents/modalities** **8.b. Discuss non-pharmacologic management strategies** **8.c. Determine when to refer to a specialist for further management** **8.d. Develop an appropriate plan for preventive care and follow up** **(PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Skin care and therapy** - **General principles: bathing, skin cleansers, creams, ointments, shampoos** • **Management for common skin problems:** - **Xerosis: emollients, moisturizers, humectants** - **Pruritus and inflammation: emollients, topical steroids, topical calcineurin inhibitors, antihistamine, menthol, phenol, topical doxepin, immunosuppressive agents, biologics** - **Physical and environmental hazards: sunscreens, barrier creams and ointments, insect repellents, clothing** - **Skin infections: topical and systemic antibiotics, topical and systemic antifungal agents, antiviral agents, cantharadin, topical salicylic acid, pediculocides and scabicides, electro-cautery, cryotherapy** - **Acne: cleansers, retinoic acids, antimicrobials, clascoterone, isotretinoin** • **Indications for referral** • **Natural course of preventable skin disease** • **Prognostication**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Identification of trigger factors • Maintenance medications • Communication and interpersonal skills		
9. Recognize common dermatological emergencies 9.a. Determine the indications for hospitalization, surgical intervention, & referral to specialists (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Common dermatologic emergencies: - Steven Johnson syndrome/toxic epidermal necrolysis (TEN) - Staphylococcal scalded skin syndrome (SSSS) - Necrotizing fasciitis - Meningococcemia - Exfoliative erythrodermas, - Physical, environmental, and natural hazards - Mental disorder skin manifestations • Dermatologic emergencies: - Determining and evaluating the emergency situation - Wound care - Proper use of antimicrobials - Fluid management - Referral protocols		

DEVELOPMENTAL AND BEHAVIORAL PEDIATRIC DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **CLINICAL CORRELATION** **1. Describe common developmental disorders in terms of:** **- prevalence/burden of disease** **- clinical manifestations** **(PO 1, 2, 8, 9, 10)**	• **Definition of disability and impairment (WHO)** • **Prevalence/burden of Illness** • **Common developmental disorders:** - **Global developmental delay/intellectual disability** - **Cerebral palsy** - **Autism Spectrum Disorders** - **Attention Deficit Hyperactivity Disorder** - **Visual impairment** - **Hearing impairment** - **Developmental language disorder** - **Specific learning disorder**	• **(Note: Select appropriate item/s in list/menu below)** • **In person and/or virtual:** - **SGD/PBL** - **Lecture** - **Simulation** - **Preceptorials** - **Demonstration-return demonstration** • **Blended learning** • **Team-based learning** • **Actual patient contact** • **Telemedicine**	• **(Note: Select appropriate item/s in list/menu below)** **Formative:** • **Mini CEX** **Summative:** • **Written exam** • **CEC** • **OSCE** • **Performance rating scale for** **- SGD/PBL** **- Preceptorials** **- Return demo** **- Telemedicine**
HISTORY TAKING **2. Elicit a complete and accurate history focusing on developmental history (PO 1, 2, 8, 9,10)**	• **History taking techniques** • **Developmental and behavioral concerns** • **Developmental milestones** • **Developmental red flags** • **Protective factors/risk factors** • **Communication skills** • **Interpersonal skills** • **Confidentiality**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **3. Perform a systematic and thorough physical and neurological examination (PO 1, 2, 8, 9, 10)**	• **PE and neurologic examination techniques appropriate for the age group** • **Respect for patient's safety, comfort and privacy**		
DIAGNOSIS **4. Formulate a plausible diagnosis and differential diagnosis (PO 1, 2, 8, 9, 10)**	• **Developmental screening versus developmental evaluation** • **Clinical presentation of developmental disabilities and behavioral disorders using Diagnostic and Statistical Manual of Mental Disorders Version 5 (DSM-5)** • **Comorbidities**		
MANAGEMENT **5. Discuss the principles of management of the common developmental and behavioral disorders (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Diagnostics** • **Interventions:** - **Educational** - **Therapy (physical, occupational, speech)** - **Psychosocial** - **Pharmacologic** • **Patient education**		

DISORDERS OF ENDOCRINOLOGY AND METABOLISM

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE 1. Discuss the impact of endocrinologic disorders on the quality of life of children and their families (PO 1, 2, 4)	• Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact • Quality of life of endocrinologic patients	• (Note: Select appropriate item/s in list/menu below) • In person and/or virtual: - Lecture - SGD/PBL - Case management - Journal clubs - Preceptorials - Lay forum • Blended learning • Actual patient encounter • Bedside teaching • Telemedicine • Mentoring • Community exposure • Advocacy projects	• (Note: Select appropriate item/s in list/menu below) Formative: • Mini CEX Summative: • Written exams • CEC • OSCE • OSPE • Performance rating scale/rubric for - SGD/PBL - CBD - Preceptorials - Telemedicine - Advocacy projects
BASIC SCIENCE CORRELATION 2. Review the anatomy and physiology of various endocrinologic organs and their correlation to endocrinopathies (PO 1, 2)	• Endocrine organs: hypothalamux, pituitary gland, pineal body, thyroids, parathyroids, adrenals, ovaries, testes • Anatomy and physiology of organs • Mechanisms for development of endocrinopathies		
CLINICAL CORRELATION 3. Discuss the common endocrinopathies in children in terms of etiology, pathophysiology, and clinical manifestations (PO 1, 2)	• Common disorders: - Hypothalamic-pituitary (HP) disorders: a. Diabetes insipidus b. Cerebral salt wasting c. Syndrome of Inappropriate Antidiuretic Hormone Secretion (SIADH) d. HP tumors - Growth disorders: a. Normal growth b. Worrisome growth 1. Short stature 2. Overgrowth 3. Obesity		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- **Thyroid disorders** **a. Hypothyroidism** **1. Congenital** **2. Acquired** **b. Hyperthyroidism** **c. Thyroid malignancies** - **Disorders of the adrenals** **a. Congenital adrenal hyperplasia** **b. Pheochromocytoma** **c. Addison's disease** **d. Cushing's disease** - **Pubertal disorders** **a. Precocious puberty** **b. Delayed puberty** - **Disorders of sexual differentiation** **a. XX** **b. XY** **c. Mosaic** - **Disorders of calcium metabolism** **a. Rickets** **b. Hyperparathyroidism** **c. Hypoparathyroidism** **d. Vitamin D deficiency/resistance** - **Inborn error of metabolism** - **Diabetes mellitus** • **Etiology** • **Pathophysiology** • **Clinical manifestations**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **PHYSICAL EXAMINATION** **DIAGNOSIS** **4. Diagnose the common pediatric endocrinopathies given different clinical scenarios (PO 1, 2, 8, 9, 10)**	• **Focused endocrinologic history** • **Physical examination** • **Differential diagnoses** • **Diagnostic tests** • **Risk factors**		
MANAGEMENT **5. Formulate a comprehensive management plan for the different endocrinopathies (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Principles of treatment** • **Common pharmacologic agents used** • **Non-pharmacologic treatment** • **Referrals** • **Complications** • **Prognosis** • **Prevention and anticipatory care**		
ADVOCACY **6. Create an educational awareness program for the community (PO 1, 2, 3, 4, 5, 6, 7, 8, 9, 10)**	• **Features and parts of an educational program** • **Communication skills**		

DISORDERS OF GASTROENTEROLOGY, HEPATOLOGY AND NUTRITION

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of gastrointestinal, hepatic and nutritional disorders on the quality of life of children and their families (PO 1, 2)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact** • **Quality of life of patients with gastrointestinal, hepatic and nutritional disorders** **- growth and development** **- productivity** **- chronicity of disease**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** **- Lecture** **- SGD/PBL** **- Video presentation** **- Conferences** **- Preceptorials: one-minute preceptor (OMP), SNAPPS** **- Journal reporting** **- Exercisses** **- Demonstation- return demonstration** • **Self-directed study/learning** • **Actual patient encounters** • **Bedside teaching** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini CEX** **Summative:** • **Direct observation** • **Written exam** • **OSCE** • **Practical exam** • **Performance rating scale/rubric for:** **- SGD/PBL** **- Preceptorials** **- Return demo** **- journal reporting** **- Telemedicine**
BASIC SCIENCE CORRELATION **2. Correlate the structure with function of the digestive system (PO 1, 2)**	• **Anatomy of the esophagus, stomach, small intestines, large intestines, liver, biliary tree, pancreas and spleen** • **Physiology of swallowing, digestion and absorption, esophageal, gastric and intestinal motility, bile formation and pancreatic function** • **Functions, absorption and requirements of carbohydrates, protein, fats, fat-soluble and water-soluble vitamins and micronutrients**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
CLINICAL CORRELATION **3. Explain the etiology, epidemiology, pathogenesis and clinical presentation of common gastrointestinal (GI) and liver disorders (PO 1, 2, 8, 9, 10)**	• **Etiology** • **Pathogenesis** • **Clinical presentations of common acute and chronic GI and liver conditions:** - **Structural: Achalasia, tracheo esophageal fistula (TEF), pyloric stenosis, gastroschisis, omphalocele, intestinal web/atresia, Meckel diverticulum, malrotation, intussusception, Hirschprung disease** - **Common GI infections:** **a. Viral, bacterial, fungal and parasitic causes of diarrhea** **b. Bacterial overgrowth and NEC** **c. Acute gastroenteritis with different types of dehydration (isotonic, hypotonic, hypertonic)** - **Chronic Diarrhea:** **a. Autoimmune enteropathies** **b. Congenital secretory and osmotic diarrhea** **c. Causes of steatorrhea (abetalipoproteinemia, bile acid malabsorption)**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- **Other GI conditions:** **a. Inflammatory bowel disease** **b. Intestinal obstruction (partial, complete; upper, lower)** **c. Constipation (functional, organic causes)** **d. Gastroesophageal reflux disease (GERD),** **e. eosinophilic esophagitis (EoE),** **f. celiac disease,** **g. eosinophilic gastrointestinal disorders (EGIDs)** **h. food allergies** **i. Peptic ulcer disease** **j. Pancreatitis** **k. Short bowel syndrome** **l. Intestinal failure** **m. Polyposis syndrome** - **Common hepatic conditions:** **a. Cholestatic jaundice among young infants** **b. Common infections of viral etiology** **c. Drug-related** **d. Autoimmune** **e. Vascular** **f. Genetic and metabolic disorders that result in liver disease: Wilson disease, α-1-anti-trypsin**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **4. Elicit a complete and accurate history (PO 1, 2, 8, 9, 10)**	• **Important details in history taking in patients with the following problems:** - **Dysphagia** - **Vomiting** - **Abdominal pain** - **Diarrhea** - **Constipation** - **Gastrointestinal bleeding** - **Jaundice**		
PHYSICAL EXAMINATION **5. Perform a systematic and thorough physical examination (PO 1, 2, 8, 9, 10)**	• **Steps in PE** • **Anthropometric measurements and proper interpretation** • **Techniques in performing an abdominal PE and maneuvers to elicit specific findings** • **Proper attitude, including respect, concern for patient's comfort and safety, confidentiality**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSIS **6. Formulate a diagnosis** **a. Select appropriate diagnostic tests and procedures to establish the cause of these disorders** **b. Discuss differential diagnoses** **(PO 1, 2, 8, 9, 10)**	• **Diagnostic tests, rationale, interpretation:** - **Blood examination** - **Stool examination** - **Hepatitis profile** - **Special examinations for metabolic disorders** - **Radiographs** - **Ultrasound** - **Endoscopy** • **Differential diagnoses**		
MANAGEMENT **7. Discuss the proper management of gastrointestinal, hepatic disorders** **a. Enumerate complications** **b. Determine prognosis** **(PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Steps in creating a Plan of Care for infants, children, and adolescents with common acute and chronic GI and hepatic conditions** • **Therapeutic management:** - **Pharmacologic: common drugs used** - **Supportive therapy** - **Surgical management** - **Common side effects/adverse reactions** - **Complications** - **Referrals** - **Preventive and anticipatory aspects of care**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
NUTRITIONAL DISORDERS			
BURDEN OF DISEASE **CLINICAL CORRELATION** **1. Identify the common nutrition problems in the Philippines and its global and national impact (PO 1, 2)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact** • **Undernutrition:** - **Moderate acute malnutrition (MAM)** - **Severe acute malnutrition (SAM)** • **Overnutrition:** - **Overweight/obesity** • **Other nutritional problems:** - **Oral health problems** - **Problems with vegetarian diet and unusual diets** - **Feeding disorders: anorexia nervosa and bulimia** • **Epidemiology of malnutrition in the Philippines** • **Pathophysiology of malnutrition**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture** - **SGD/PBL** - **Video presentation** - **Role play** - **Conferences** - **Preceptorials: one-minute preceptor (OMP), SNAPPS** - **Journal reporting** - **Exercises** - **Demonstration- return demonstration** - **Workshop on protocol making** • **Self-directed study/learning** • **Actual patient encounters** • **Bedside teaching** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini CEX** • **Clinical skills lab- return demo** **Summative:** • **Direct observation** • **Written exam** • **OSCE** • **Practical exam** • **Performance rating scale/rubric for:** **- SGD/PBL** **- Preceptorials** **- Role play** **- journal reporting** **- Telemedicine** **- Research protocol output**
1.a. Describe the usual clinical manifestations of malnutrition (PO 1, 2)	• **Clinical manifestation of the following:** - **Marasmus** - **Kwashiorkor** - **Obesity/overweight** - **Vitamin deficiencies/excesses** - **Mineral deficiencies** - **Undernutrition** - **Wasting** - **Stunting**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **PHYSICAL EXAMINATION** **DIAGNOSIS** **2. Assess the nutritional status of given patients (PO 1, 2, 8, 9, 10)**	• **Medical history:** • **Complete PE to include:** - **Anthropometric measurements (weight, height/length, head circumference, mid- upper arm circumference (MUAC), weight for length/height, BMI)** - **Recognition of signs of malnutrition referable to macro- and micronutrient deficiency or excess** **a. Skin: dermatoses** **b. Head: hair distribution** **c. Eye: xerophthalmia, conjunctival pallor** **d. Mouth: cheilosis, angular stomatitis, dental caries** **e. Abdomen: hepatomegaly, ascites** **f. Extremities: edema**		
DIAGNOSTIC TESTING **3. Discuss appropriate laboratory work-ups for specific disorders (PO 1, 2, 8, 9, 10)**	• **Diagnostic work-ups for specific disorders** • **Interpretation of results**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **4. Discuss nutritional management in children with specific diseases (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Nutritional management of children with:** - **Renal disease** **a. Hypertension** **b. Nephrotic syndrome** **c. Glomerulonephritis,** **d. Acute/chronic renal failure** **e. Children on dialysis)** - **Hyperlipidemia and obesity** - **Cardiac diseases: CHF** - **Diabetes mellitus** - **Allergic disorders** - **Post-operative states** - **Burns** - **Other conditions**		
ADVOCACY **5. Provide health education and proper disease concept to patients and families (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Maintenance of nutritional status after nutritional rehabilitation** • **Role of the family and community in the maintenance of nutritional status** • **Proper nutrition starting in infancy** • **Integration with other health programs** • **Immunization, breastfeeding, control of communicable diseases**		

HEMATOLOGIC DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of hematologic disorders on the quality of life of children and adolescents (PO 1, 2)**	• **Epidemiology- incidence, prevalence, morbidly and mortality rates, economic impact** • **Quality of life**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture** - **SGD/PBL** - **Case-management discussions** - **Demonstration-return demonstration** - **Preceptorials** • **Bedside teaching** • **Laboratory** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini CEX** **Summative:** • **Written exam** • **OSCE** • **OSOE** • **CBD** • **CEC** • **Rating scale/rubric for** - **SGD/PBL** - **Case management** - **Return demo** - **Preceptorials** - **Synthesis reports** - **Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Discuss the anatomic, physiologic, and pathophysiologic bases of the common hematologic disorders (PO 1, 2, 4)**	• **Anatomy** • **Physiology** • **Clinical manifestations** • **Pathophysiology** • **Common hematologic disorders** • **Anemias:** - **Anemia due to blood loss** - **Nutritional anemias** - **Hemolytic anemias** - **Bone marrow failure** • **Bleeding:** - **Platelet disorders** - **Coagulation disorders** • **Hematologic cancers/hematopoietic malignancies:** - **Acute leukemias** - **Chronic myelogenous leukemia**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **3. Obtain a complete hematologic history with emphasis on red flags for hematologic disorders (PO 1, 2, 4, 6, 8, 9, 10)** **Construct a pedigree (PO 1, 2)**	• **Focused medical history - pallor or abnormal reddish hue in skin with headache, shortness of breath, swollen lymph nodes, eating ice or other hard substances, prolonged bleeding time** • **Red flags** • **Family history/ Pedigree**		
PHYSICAL EXAMINATION **4. Perform a complete physical examination emphasizing findings consistent with hematologic disorders (PO 1, 2, 8, 9, 10)**	• **Physical examination** **- Skin** **- Head and neck: lymph nodes** **- Chest: lungs and heart** **- Abdomen: liver and spleen** **- Extremities: nail beds, pulses** **- Neurologic**		
DIFFERENTIAL DIAGNOSIS **5. Discuss common differential diagnoses based on medical history and PE findings (PO 1, 2, 4)**	• **Common differential diagnoses for:** **- anemia** **- bleeding** **- malignancy**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSTIC TESTING **6. Choose the appropriate diagnostic workups for the common hematologic disorders (PO 1, 2, 8, 9, 10)**	• **Anemias: CBC, red cell morphology, RBC indices, peripheral blood smear, Coomb's test, G6PD level, hemoglobin electrophoresis, HPLC, serum iron, TIBC, serum ferritin, serum folic acid, VitaminB12 assay, osmotic fragility test, stool exam (to include occult blood), bilirubin levels, bone marrow examination, enzyme assay, genetic studies** • **Bleeding disorders: CBC, platelet count, peripheral blood smear, bleeding time, prothrombin time, partial thromboplastin time, thrombin time, CRT, clot lysis, coagulation factor assay, fibrin degradation products, Von Willebrand's Factor, mixing studies, genetic studies** • **Hematologic cancers: CBC, platelet count, peripheral blood smear, reticulocyte count, bone marrow exam, lymph node biopsy, uric acid, LDH, immunophenotyping flowcytometry, cytogenetic studies**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSIS **7. Establish the diagnosis based on supporting evidences (PO 1, 2, 4, 8, 9, 10)**	• **Criteria for diagnosis of hematologic disorders**		
MANAGEMENT **8. Discuss the principles in the management of common hematologic disorders (PO 1, 2, 4, 8, 9, 10)**	• **Indication, dosages, onset of action, duration of use, side effects of therapeutic agents, blood component products, therapeutic interventions, procedures, and appropriate referral to specialists:** - **Anemias: proper diet/proper hygiene, hematinics, steroids, immunosuppressives, blood component therapy, surgery, genetic counseling** - **Bleeding disorders: steroids, blood component therapy, factor concentrates, IV immunoglobin infusion, Rhogam infusion, Vitamin K, surgery** - **Hematologic cancers: blood component therapy, chemotherapy, antibiotics, radiotherapy, bone marrow transplant, stem cell transplant**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
9. Develop a basic therapeutic plan for common hematologic emergencies (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **High output failure/low output failure:** - **Packed RBC transfusion** - **Diuresis** - **Inotropic agents** • **Bleeding (massive/ fatal):** - **IVF** - **Blood component therapy** - **IV immunoglobulin infusion** - **Rhogam infusion** - **Coagulation factor infusion** - **Steroids** - **Surgery** • **Tumor lysis syndrome:** - **IVF** - **Diuresis** - **NAHCO3** - **Allopurinol** - **Kayexalate/ insulin** - **Calcium gluconate** - **Dialysis**		
ADVOCACY **10. Discuss a program or plan for follow-up including preventive, promotive, restorative and rehabilitative care (PO 1, 2, 3, 4, 5, 6, 8, 9, 10)**	• **Proper monitoring and follow up of patients with hematologic disorders**		

ONCOLOGIC DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE 1. Discuss the impact of hematologic disorders on the quality of life of affected children and adolescents (PO 1, 2, 4)	• Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact • Quality of life- effect on: • Growth and development • School performance • Productivity as an adult	• (Note: Select appropriate item/s from list/menu below) • Actual patient encounter • In person and/or virtual: Large group learning - Multidisciplinary conference (MDC) - Lectures - Video presentation - Town hall meeting Small group learning - Family conference - Preceptorials - SGD/PBL - Role-play - Case management - Demonstration-return demonstration • Bedside teaching • Independent study period (ISP) • Advocacy/ Community project	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX Summative: • Written exam or online apps • OSCE • Performance rating scale/rubric for: - Preceptorials - SGD/PBL - Role-play - Case management - Advocacy project • Journal/ reflection paper • Portfolio • Peer evaluation
CLINICAL CORRELATION 2. Identify common pediatric oncologic conditions with presenting signs and symptoms suggestive of malignancy rather than an infectious or benign condition (PO 1, 2, 8, 9, 10)	• Red flag signs of childhood malignancies • Clinical presentation of benign versus malignant tumors • Common pediatric tumors, syndromes and systemic manifestations associated with pediatric malignancies: - Feminization - Virilization - Bleeding - Others: WAGR, BWS, DDS - hypertension, hemihypertrophy		
HISTORY TAKING 3. Obtain a complete and accurate history pertinent for a diagnosis of a possible cancer (PO 1, 2, 8, 9, 10)	• Components of medical history which are considered red flags for childhood malignancies; recognizing symptom complexes: - Prolonged fever - Bone pains - Weight loss - Rapidly enlarging masses - Reversal of growth and developmental milestones		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• History of malignancy in the family or any genetic predisposition • Environmental exposures • Communication and Interpersonal skills • Respect for confidentiality and privacy		
PHYSICAL EXAMINATION 4. Perform a thorough physical-examination with emphasis on organ systems possibly affected by cancer: 4.a. Recognize the presence of physical findings that may point to a malignancy 4.b. Perform a thorough neurological exam (PO 1, 2, 8, 9, 10)	• Steps in performing PE concerning a pediatric patient with possible malignancy • Physical findings that may point to a cancer/ malignancy: - Skin discoloration/ changes - Pleural effusions - Intrathoracic masses - Subcutaneous nodules - Enlarged lymph nodes - Masses in different parts of the body - Eye changes (new squint, white pupil) • Communication skills • Compassion • Respect for patient's safety, comfort and privacy		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIFFERENTIAL DIAGNOSIS **5. Consider plausible differential diagnoses given the medical history and physical findings (PO 1, 2, 8, 9, 10)**	• **Common signs and symptoms of malignancies prevalent in the pediatric age group** • **Criteria for diagnosis and staging of common childhood malignancies:** - **CNS tumors** **a. supratentorial (pilocytic astrocytoma, glioma, ependymoma)** **b. infratentorial (cerebellar medulloblastoma, brainstem glioma)** - **Retinoblastoma** - **Liver tumors: hepatoblastoma, benign hemangioendothelioma, hepatocellular CA)** - **Renal tumors: malignant Wilms tumor, benign mesoblastic nephroma** - **Adrenal and endocrine tumors: neuroblastoma, pheochromocytoma** - **Soft tissue tumors: rhabdomyosarcoma, fibrosarcoma** - **Bone tumors: osteosarcoma, Ewing sarcoma** - **Germ cell tumors: germinoma, teratoma, yolk sac tumor** - **Histiocytic : Langerhans cell histiocytosis**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSTIC TESTING **6. Select the common diagnostic tests and procedures that support or confirm the diagnosis of cancer (PO 1, 2, 8, 9, 10)**	• **Serologic tests:** - **Tumor markers** • **Diagnostic procedures that support/confirm the diagnosis and assess disease severity:** - **Bone marrow aspiration** - **Biopsy with immunohistochemical stains** • **Imaging studies:** - **X-rays** - **Ultrasound** - **CT scan** - **MRI** - **Positron emission tomography (PET) Scan** - **Bone scan** • **Clinical practice guidelines in the diagnosis of childhood malignancies**		
MANAGEMENT **7. Initially manage common oncologic emergencies (PO 1, 2, 8, 9, 10)**	• **Clinical presentation, pathophysiology and management of oncologic emergencies:** - **Tumor lysis syndrome** - **Superior vena cava syndrome, superior mediastinal syndrome** - **Intestinal and genitourinary** - **obstruction** - **Neurologic symptoms**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Clinical practice guidelines in the management of oncologic emergencies in children • Initial management • Indications for referral • Complications • Prognosis • Preventive and anticipatory care		
8. Discuss the principles of the different treatment options in the management of childhood malignancies (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Treatment options: - Surgery - Chemotherapy (adjuvant vs neoadjuvant) - Immunotherapy, - Molecular targeted therapy - Radiotherapy - Palliative care - Hematopoietic stem cell transplantation (HSCT) • Clinical practice guidelines in the management of specific childhood malignancies • Indications for referral		
9. Practice inter-professionalism by effectively working in multidisciplinary teams with co-physicians and other professionals in managing childhood malignancies (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Multidisciplinary team approach in management - Tumor board • Clinical practice guidelines for the comprehensive management of childhood tumors		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
10. Demonstrate effective communication skills especially as part of the medical team (PO 1, 2, 5, 8, 9, 10)	• **Psychological, social, emotional aspects of illness** • **Principles of disclosure which should include:** - **Empathy** - **Communication skill** - **Interpersonal skill** - **Honesty** - **Confidentiality** • **Basic principles of palliative care from diagnosis to end of life**		
ADVOCACY **11. Promote comprehensive and effective pediatric cancer care** **11.a. Advocate for primary and secondary cancer prevention in clinical practice and in the community** **11.b. Recognize the roles of the family, primary physician, government agencies and private organizations (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **National law/s that protect cancer patients:** - **RA 11215: National Integrated Cancer Control Act (NICCA)** - **Universal Health Care** • **Principles of cancer prevention** • **Incorporation of primary cancer prevention during well child consultations through:** - **Education** - **Vaccination** - **Recommended programmed screening including late effects of cancer treatment** • **Clinical practice guidelines for cancer prevention and late effects of cancer treatment** • **Involvement of the family, primary physician and public and private organizations and institutions in patient care** • **Local cancer support resources** • **Communication skills**		

INFECTIOUS DISEASES

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the global, regional and national burden of infectious diseases in the pediatric age group (PO 1, 2, 4)**	• **Global, regional and local epidemiology of common infectious diseases** - **incidence** - **prevalence** - **mortality rate** - **morbidity rate** - **economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Conferences: morbidity/mortality** - **Lecture** - **SGD/PBL** - **Preceptorials** - **Video presentation** - **Simulation** - **Journal club** • **Bedside teaching** • **Ward rounds** • **Telemedicine** • **Advocacy Project**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **OSCE** • **OSOE** • **Performance rating scale for:** **- SGD/PBL** **- Preceptorials** **- Journal club** **- Telemedicine** **- Advocacy Project**
CLINICAL CORRELATION **2. Recognize common clinical presentations of infectious diseases, and be familiar with the usual infectious causes of these conditions in terms of etiology, epidemiology, pathophysiology, clinical presentation, differential diagnosis (PO 1,2,8,9,10)**	• **Etiology** • **Epidemiology** • **Pathogenesis/pathophysiology** • **Clinical presentation** • **Differential diagnosis:** - **Fever** - **Fever without localizing signs** - **Fever of unknown origin (FUO)** - **Fever with localizing signs** **a. Rash** **b. Cutaneous lesions other than rash** **c. Lymphadenopathy Headache and/or altered sensorium** **d. Seizure** **e. Eye discharge** **f. Sore throat** **g. Ear pain** **h. Cough** **i. Cyanosis** **j. Abdominal pain** **k. Jaundice** **l. Hepatospleno-megaly**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	m. Diarrhea n. Dysuria o. Genital discharge p. Joint pain		
DIAGNOSTIC TESTING 3. Choose appropriate work-up to confirm a definitive diagnosis of common infectious conditions (PO 1, 2, 8, 9, 10)	• Common laboratory tests: - CBC - Urinalysis - Stool examination - Analysis and culture of blood, discharges and other body fluids Acute phase reactants (ESR, CRP) • Serological test • Immunological tests (e.g., Mantoux test) • Radiologic and other imaging procedures • Other ancillary procedures - RT-PCR - Rapid antigen test - Genexpert		
DIAGNOSIS 4. Establish the diagnosis of children and adolescents, focusing on the most common infectious diseases in the country (PO 1, 2, 8, 9, 10)	• Common infectious diseases: - Bacterial infections a. Cholera b. Diphtheria c. Escherichia coli and another gram negative enterobacterial infections d. Gonorrhea e. Hemophilus influenzae infection f. Leprosy g. Leptospirosis h. Meningococcal infection		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	i. Pertussis j. Pneumococcal infection k. Salmonella infection (typhoid, non-typhoid) l. Shigellosis m. Staphylococcal infection n. Streptococcal infection o. Syphilis p. Tetanus q. Tuberculosis - Viral infections a. AIDS/HIV infection b. Coronavirus/covid 19 infection (SARS COV-2) c. Cytomegalovirus infections d. Dengue fever/dengue hemorrhagic fever e. Encephalitides and aseptic meningitis (vs. purulent, TB, fungal) f. Epstein-Barr virus g. Enteroviral (poliomyelitis, coxsackie A and B, echo virus) (Cont. Viral infections) h. Hepatitis A-G i. Herpes simplex virus, types 1 and 2 j. Influenza and influenza-like infections k. Mumps l. Rabies m. Rubella, rubeola and other viral exanthems		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- **Parasitic diseases** **a. Amebiasis** **b. Ascariasis** **c. Balantidiasis** **d. Capillariasis** **e. Enterobiasis** **f. Filariasis** **g. Giardiasis** **h. Hookworm infection** **i. Malaria Paragonimiasis** **j. Pneumocystis infection** **k. Scabies** **l. Schistosomiasis** **m. Strongyloidiasis** **n. Trichuriasis** **o. Toxoplasmosis** - **Fungal infections** **a. Aspergillosis** **b. Candidiasis** **c. Cryptococcosis**		
MANAGEMENT **5. Discuss the rationale behind the treatment of infectious diseases and a basic plan of management (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Rational drug use: indications, dosage, frequency, duration, side/adverse effects, complications** • **Specific treatment via judicious use of antimicrobials** - **Pharmacologic** - **Non-pharmacologic** • **Symptomatic/adjunct treatment** • **Supportive treatment**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
6. Recognize common complications and determine the need for initial management and/or referral (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **Common complications of infectious diseases as listed above (Contents #3)**		
7. Institute appropriate prevention and control measures (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **Isolation** • **Chemoprophylaxis** • **Immunization (passive/active)** • **Preventive measures:** - **Good hygiene** - **Environmental sanitation** - **Proper waste disposal** • **Approach to the prevention of endemic, epidemic and pandemic illnesses**		

NEONATAL DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the burden of illness of high risk newborns and its long term effects on their quality of life (PO 1, 2, 4)**	• **Epidemiology: incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture-discussion** - **SGD/PBL** - **Demonstration-return demonstration** - **Preceptorials** • **Bedside teaching** • **Ward rounds** • **Actual patient encounter** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **OSCE** • **Performance rating scale for:** **- SGD/PBL** **- Return demo** **- Preceptorials** **- Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Discuss the anatomic, physiologic and pathologic basis of problems in the newborn (PO 1, 2)**	• **Deviation/aberration in intrauterine growth** • **Predisposing maternal, placental and fetal factors** • **Anatomic and physiologic handicaps, potential pathologies (risk assessment) peculiar to each category** • **Birth injuries** • **Congenital anomalies** • **Anatomic and physiologic development of the digestive system:** - **Fluid, electrolyte, caloric, nutrient requirements of the newborn** - **Normal variations in feeding patterns** - **Signs and symptoms suggestive of feeding problems/difficulties**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Respiratory distress:** - **Definition of apnea** - **Forms of cyanosis** - **Differences between pulmonary and non-pulmonary causes of respiratory distress** - **Classification of condition according to severity** • **System/s involved based on history and PE** • **Vomiting, diarrhea, abdominal distension:** - **Normal stool patterns of the newborn** - **Organic and non-organic causes of abdominal distension** - **Manifestations of Intestinal obstruction and corresponding level of obstruction** - **Abnormal secretions/discharges** - **Source/s of abnormal discharges based on history and gathered data** • **Pallor and bleeding:** - **Normal hematologic values in the newborn** - **Normal coagulation process** - **Causes of neonatal anemia** - **Differences between acute and chronic blood loss** - **Different sources of bleeding**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Jaundice: - Neonatal billiburin metabolism - Differences between physiologic and pathologic jaundice - Various types of hyperbilirubinemia		
3. Identify high-risk newborns and their potential problems (PO 1, 2, 8, 9, 10)	• Preterm • Low birth weight (LBW) • Small for gestational age (SGA) • Infant of diabetic mother (IDM) • Others • Jitteriness/ seizures: - Differences between jitteriness and seizure - Different types of neonatal seizures - Correlation of seizure with possible cause/s • Meconium-related disorders: - Classification of meconium staining - Prenatal/perinatal factors predisposing to the condition - Concomitant signs of fetal distress on fetal monitoring: a. Potential problems relating to meconium staining b. Pathophysiology behind potential problems		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Temperature instability: - Different methods of obtaining body temperature and its corresponding normal values - Signs and symptoms of temperature abnormality - Acceptable alternative methods of taking body temperature • Sensorial problems: - Signs of irritability - Alterations in consciousness - Changes in muscle tone		
HISTORY TAKING 4. Elicit an accurate and thorough history with focus on character and circumstances surrounding the manifestations (PO 1, 2, 8, 9, 10)	• Clinical presentation of problems in the newborn: - Deviations/aberrations in the intrauterine growth - Feeding difficulties - Cyanosis, respiratory distress and apnea - Vomiting, diarrhea, abdominal distension/constipation - Abnormal secretions/discharges - Pallor and bleeding - Jaundice - Jitteriness and seizures - Meconium-related disorders - Temperature instability - Sensorial problem		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **5. Perform a complete physical and neurologic examination (PO 1, 2, 8, 9, 10)**	• **Clinical findings based on physical and neurological examinations**		
DIFFERENTIAL DIAGNOSIS **6. List differential diagnosis based on evidence and data gathered (PO 1, 2, 8, 9, 10)**	• **List of differential diagnosis and possible supporting explanation and justification for the considered diagnosis**		
7. Discuss the natural course of the illness (PO 1, 2, 8, 9, 10)	• **Natural course of the disease** • **Clinical manifestations of the disease** • **Complications** • **Outcome**		
DIAGNOSIS **DIAGNOSTIC TESTING** **8. Confirm diagnosis through appropriate work-up (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Asphyxia of the newborn:** - **ABG analysis** - **Urinalysis** - **Occult blood in stools** - **Cranial ultrasound/CT scan/MRI** - **Renal function tests** - **ECG** - **Chest X-ray** - **Coagulation studies** - **EEG** • **Intrauterine growth retardation:** - **CBC** - **CBG** - **Microbiologic studies** - **Serologic studies** - **Chromosomal studies** - **Newborn screening**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Meconium aspiration syndrome :** - **Chest X-ray** - **ABG analysis** • **Hemorrhagic disease of the newborn:** - **Coagulation studies** - **PT/PTT** - **Coagulation factor determination** - **Apt's test** • **Birth trauma:** - **Cranial ultrasound/CT scan** - **Radiographic examination of body parts** • **Metabolic disorders:** - **Hemoglucotest** - **Serum electrolytes** - **Serum calcium and magnesium** - **Arterial blood gas** - **Serum ammonia level** - **Serum lactate level** - **Urine metabolic screen** - **Renal function tests** • **Anatomic congenital anomalies: Imaging studies of organ involved** - **Chromosomal analysis/karyotyping**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **9. Discuss the management of the common problems in the newborn (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Prematurity** • **Neonatal sepsis:** - **Antibiotic coverage** • **Respiratory distress syndrome:** - **Surfactant** - **Respiratory support** • **Hypoxemic-ischemic encephalopathy (HIE)/asphyxia:** - **Therapeutic hypothermia** - **Anticonvulsant** • **Jaundice:** - **Nomograms** - **Phototherapy** - **Exchange transfusion** • **Hypoglycemia:** - **Monitoring of glucose** - **Correction of hypoglycemic episode** • **Congenital anomalies**		
10. Discuss the neonatal resuscitation program of the Philippines (NRPh plus) (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **EINC** • **Breastfeeding** • **Kangaroo Mother Care (KMC)** • **Stabilization and Transport (STAT)** • **Neonatal resuscitation**		

NEUROLOGIC DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **BASIC SCIENCE AND CLINICAL CORRELATION** **1. Identify the common neurologic disorders in children** **a. Discuss burden of illness of neurologic disorders among children and adolescents** **b. Correlate anatomy and physiology with development of neurologic disorders** **c. Discuss the etiology, pathophysiology and clinical manifestations** **d. Enumerate common disorders** **(PO 1, 2, 8, 9, 10)**	• **Basic science (anatomic and physiologic correlation)** • **Clinical correlation (etiology, pathophysiology and clinical manifestations)** • **Burden of disease (epidemiology)** • **Common disorders:** - **Congenital anomalies of the CNS and spinal cord - embryogenesis and ontogenesis in the development of the nervous system. timelines in the development of malformations at the time of insult)** - **Seizures:** **a. Epilepsy (ILAE Classification, common epileptic syndromes)** **b. Seizure mimics** **c. Febrile seizures** **d. Neonatal seizures)** - **Movement disorders** - **Headache :** **a. Primary headaches - classification and criteria for diagnosis** **b. Secondary headaches**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Conferences** - **Lecture-discussion** - **SGD/PBL** - **Preceptorials** - **Demonstration-return demonstration** - **Instructional video** • **Bedside teaching** • **Actual patient encounters** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini CEX** **Summative:** • **Written exam** • **OSCE** • **Oral exam** • **CEC** • **Performance rating scale for:** - **SGD** - **Group presentation** - **Preceptorials** - **Overall clinical performance (end of rotation)**

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- **Head trauma and spinal cord injuries - Pediatric Glasgow Coma Scale and treatment guidelines** - **CNS infections (Meningitis/encephalitis/ brain abscess)** - **Cerebral Palsy** - **Other encephalopathies and neurodegenerative disorders** - **Neurocutaneous syndromes** - **Demyelinating disorders of the CNS** - **Pediatric stroke** - **Neuromuscular disorders (GBS, myasthenia gravis, muscular dystrophies, spinal muscular atrophy, myopathies)** - **Brain tumors** - **Neurometabolic disorders** - **Neurodevelopmental disorders and intellectual disabilities** - **Neurologic emergencies:** **a. Increased intracranial pressure** **b. Status epilepticus** **c. Altered sensorium**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **2. Elicit a complete and accurate clinical pediatric and neurologic history (PO 1, 2, 8, 9, 10)**	• **Pediatric history** • **History of present illness related to neurologic symptoms**		
PHYSICAL EXAMINATION **3. Perform a systematic and thorough age appropriate physical and neurologic examination in various age groups (PO 1, 2, 8, 9, 10)**	• **Age-appropriate neurologic exam in the** - **Newborn** - **Infants (>1 month to < 2 years)** - **Child (2-5 years)** - **School age (>6 years)** • **Age limits for developmental milestones** • **Red flags in the developmental milestones** • **Proper use of neurologic instruments**		
4. Interpret the findings of the neurologic examination (PO 1)	• **Primitive reflexes** • **Adaptive reflexes** • **Pathologic reflexes**		
DIFFERENTIAL DIAGNOSIS **5. Formulate a logical differential diagnosis based on signs and symptoms (PO 1, 2, 8, 9, 10)**	• **Localization based on signs and symptoms and neurologic findings** • **Differential diagnosis considering the patient's demographic profile, clinical course, neurologic findings and other associated conditions**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSIS **6. Formulate a sound clinical diagnosis based on history and PE findings and with the use of algorithms (PO 1, 4, 8, 9, 10)**	• **Algorithms in the diagnosis and management of common neurologic disorders**		
DIAGNOSTIC TESTING **7. Determine the appropriate diagnostic examinations (PO 1, 2, 8, 9, 10)**	• **Indications, contraindications of the following examinations:** - **Neuroimaging** **a. Skull and spine X-rays** **b. Sonograms** **c. CT scan** **d. MRI** **e. Angiograms** • **Lumbar puncture and CSF analysis** • **Neurophysiologic Exams** - **EEG** - **EMG/NCV** - **Evoked potentilas** • **Biopsies - muscle and nerve biopsy** • **Genetic and molecular studies**		
MANAGEMENT **8. Discuss the rationale for the appropriate treatment plan (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Short-term and long-term treatment** - **Pharmacologic treatments** - **Surgical treatments** - **Rehabilitation management**		
9. Discuss the patient's prognosis under consultant/resident supervision (PO 1, 2, 5, 6, 8, 9, 10)	• **Communication skill** • **Family counselling technique**		

RENAL DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of genitourinary tract disorders and its long term effects on the quality of life of affected children and adolescents (PO 1, 2, 4)**	• **Global, regional and local epidemiology of common genitourinary disorders** - **incidence** - **prevalence** - **mortality rate** - **morbidity rate** - **economic impact** • **Impact of disease on quality of life**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Video presentation** - **Lectures** - **SGD/ PBL** - **Preceptorials** - **Case conference** - **Concept mapping** - **Chart review** - **Journal-club/critical appraisal of journals (CATS)** - **Seminar/workshop** • **Actual patient encounter** • **Bedside teaching** • **Independent study period (ISP)** • **Telemedicine** • **Project** • **Networking with other health professionals**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written report** • **OSCE** • **OSOE** • **CEC** • **Portfolio** • **Performance rating scale/rubric for:** **-SGD/ PBL** **-Preceptorials** **-Case conference** **-Journal club** **-Project** **-Telemedicine**
BASIC SCIENCE CORRELATION **2. Correlate the anatomy and physiology with the development of genitourinary tract disorders (PO 1, 2)**	• **Anatomy** • **Physiology**		
CLINICAL CORRELATION **3. Recognize presenting signs and symptoms of the ten (10) most common renal syndromes (PO 1, 2, 8, 9, 10)** **4. Diagnose common pediatric renal illnesses using an algorithmic approach in a patient with common renal manifestations (PO 1, 2, 8, 9, 10)**	• **Pathophysiology, epidemiology, clinical presentation, red flags of the following renal syndromes:** - **Glomerular diseases** **a. Hematuria** **b. Proteinuria** **c. Oliguria/anuria** **d. Hypertension** **e. Post-infectious glomerulonephritis (GN)** **f. Nephrotic syndrome** - **Tubular disorders** **a. Polyuria and polydipsia** **b. Renal tubular acidosis** **c. Tubulointerstitial nephritis**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION

5. Discuss the epidemiologic and pathophysiologic bases of the common renal syndromes (PO 1, 2, 8, 9, 10)	- **Fluids and electrolytes**
	  a. Hyponatremia
	  b. Hypernatremia
	  c. Hypokalemia
	  d. Hyperkalemia
	  e. Hypocalcemia
	  f. Acid-base disorders
	- **Systemic diseases**
	  a. Systemic lupus erythematosus
	  b. Henoch-Schoenlein purpura
	  c. Infectious diseases of the kidney
	- **Hypertension**
	  a. Primary
	  b. Secondary
	- **Urinary tract disorders**
	  a. Urinary tract infection (UTI)
	  b. Urolithiasis
	  c. Obstructive uropathy
	- **Congenital anomalies of the kidneys and the urinary tract (CAKUT)**
	- **Renal and other genitourinary tract (GUT) tumors**
	  a. Wilms tumor
	  b. Renal cell carcinoma
	  c. Neuroblastoma
	- **Acute kidney injury**
	  a. Pre-renal
	  b. Intrinsic
	  c. Post-renal
	- **Chronic kidney disease**
	- **End stage kidney disease**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **6. Elicit a comprehensive pediatric renal history (PO 1, 2, 8, 9, 10)**	• **Components of a complete pediatric history including psychosocial (HEADSSS) aspect for adolescents**		
PHYSICAL EXAMINATION **7. Perform a complete and age-appropriate pediatric examination (PO 1, 2, 8, 9, 10)**	• **PE in children** • **Emphasis on syndromic manifestation in:** - **Nephritic vs. nephrotic syndrome** - **Acute kidney injury (AKI) vs. chronic kidney disease (CKD)** - **Congenital diseases in newborns and children** - **Examination of the genitalia, the spine, back, including Tanner staging, etc.**		
DIAGNOSIS **DIAGNOSTIC TESTING** **8. Select appropriate and correctly interpret diagnostic work-up to confirm diagnosis (PO 1, 2, 8, 9, 10)**	• **Principles, rationale, proper collection and correct interpretation of diagnostic examinations for kidney and urinary tract problems: (organize into labels- routine, chemical, serologic, radiologic, etc.):** - **CBC** - **Urinalysis** - **Urine culture and sensitivity** - **Blood chemistries: BUN, creatinine, serum Na, K, Cl, calcium, phosphorus, magnesium, uric acid, TPAG, lipid profile, C3, ASO, ANA, cholesterol, triglycerides** - **Arterial blood gas**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- Urine protein-creatinine ratio or 24-hour urinary protein excretion - Creatinine clearance - Imaging studies: ultrasonography, Doppler studies, X-rays, nuclear imaging, CT scan - Ultrasound-guided renal biopsy		
MANAGEMENT 9. Discuss the basic management of common renal disorders using an evidence-based approach (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Indication, precaution, dosage, duration of use, side effects of pharmacologic agents: - Antimicrobials - Diuretics - Anti-hypertensives - Steroids and immunosuppressants - Renal supportive treatments: erythropoietin, iron supplement, sodium bicarbonate, calcium supplement, vitamin D - Renal replacement therapy (RRT): dialysis [peritoneal dialysis (PD) and hemodialysis (HD)] continuous RRT (CRRT), kidney transplantation		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Non-pharmacologic measures: - Diet - Fluid restriction - Physical activity limitation • Relevant literature review • Critical appraisal of literature		
10. Recognize the presence of complications of common emergencies, and the need for further treatment and referral (PO 1, 2, 4, 5, 8, 9, 10)	• Common renal emergencies: - Pulmonary congestion - Hypertensive emergencies/urgencies - AKI and uremic syndromes - Severe electrolyte and acid-base disorders - Renal tumors - Obstructions - Trauma to the GUT		
11. Outline a program for preventive, promotive, and rehabilitative renal care (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Preventive, promotive and rehabilitative care for the different renal syndromes • Transition of care from adolescence to adulthood • Health education		
ADVOCACY 12. Adopt socially relevant, ethical and equitable management considerations in pediatric renal patients (PO 1, 2, 4, 5, 6, 8, 9, 10)	• Morbidity and mortality: Philippine census and ranking • Global burden of kidney disease • National burden for kidney disease		

RESPIRATORY DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the impact of respiratory disorders in children and adolescents and its long term effect on their quality of life (PO 1,2,4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Conferences** - **Lecture-discussion** - **Demonstration- Return demonstration** - **SGD/PBL** - **Preceptorials** - **Role-play** • **Actual patient encounters** • **Bedside teaching** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **Oral exam** • **Practical exam** • **OSCE** • **CEC** • **Graded oral recitation** • **Written report** • **Performance rating scale for:** **- SGD/PBL** **- Preceptorials** **- Return demo** **- Role-play** **- Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Explain the anatomic, physiologic and pathophysiologic basis of the presenting pulmonary problem/complaint (PO 1, 2)**	• **Anatomy and physiology of the respiratory system** • **Pathophysiology of common respiratory complaints:** - **Nasal catarrh** - **Sneezing** - **Hoarseness** - **Cough** - **Stridor** - **Wheezing** - **Gurgly chest (“halak”)** - **Hemoptysis** - **Chest pain** - **Difficulty of breathing** - **Cyanosis**		
HISTORY TAKING **3. Elicit a complete history which focuses on the character and circumstances surrounding the complaint. (PO 1, 2, 8, 9, 10)**	• **Complete history of the patient, focus on respiratory complaint/problem** • **Communication skill** • **Interpersonal skill** • **Respect for patient’s privacy confidentiality** • **Thoroughness**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **4. Perform a complete PE using inspection, palpation, percussion, and auscultation (PO 1, 2, 8, 9, 10)**	• **Complete PE including BP in all extremities, body weight and height (length), cyanosis +/- clubbing of nailbeds, edema, pulses upper and lower extremities, dysmorphic features** • **Cardiac examination: chest symmetry, point of maximal impulse and location, heave, thrill, heart sounds and murmur, rhythm and rate** • **Communication skill** • **Consideration for the patient's safety, comfort and privacy**		
5. Determine the most likely abnormality and its severity based on information gathered (PO 1, 2, 8, 9, 10)	• **Correlation and findings on PE with knowledge of the anatomy and physiology of the respiratory system** • **Signs and symptoms presented and their severity**		
DIFFERENTIAL DIAGNOSIS **6. List the differential diagnosis based on gathered data. (PO 1, 2, 8, 9, 10)**	• **Approach to differential diagnoses** • **Primary diagnosis and bases** • **Upper respiratory tract:** - **Rhinitis** - **Pharyngitis** - **Sinusitis** - **Otitis media** - **Tonsillitis** - **Epiglottitis** - **Acute laryngotracheobronchitis**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Lower respiratory tract:** - **Bronchitis** - **Bronchiolitis** - **Pneumonia** - **Asthma** - **Pulmonary tuberculosis**		
DIAGNOSTIC TESTING **7. Choose the appropriate diagnostic examinations to confirm the diagnosis (PO 1, 2, 8, 9, 10)**	• **Indications, availability, reliability of diagnostic examinations:** - **Pulse oximetry** - **CBC** - **Microbiological studies** - **Tuberculin skin tests** - **Blood gas analysis** - **Chest radiograph** • **Special procedures, to include:** - **Spirometry** - **Peak flow measurement** - **Needling** - **Thoracentesis** - **Lung tap** - **Lung biopsy** - **Bronchoscopy** - **Fluoroscopy** - **Chest ultrasonography** - **Ventilation/perfusion scan** - **CT scan** - **MRI** • **Written informed consent** • **Psychological support to the patient and family**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSIS **8. Establish the diagnosis using sound evidence (PO 1, 2, 8, 9, 10)**	• **Criteria for the diagnosis of common respiratory diseases including:** - **Referencing updated clinical practice guidelines**		
MANAGEMENT **9. Discuss the plan of treatment for emergency care, definitive care, and long-term/rehabilitative care for various common respiratory diseases (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Relevance, availability, socio-economic factors, rehabilitative care and schedule of follow-up in the common respiratory diseases** • **Indications for hospitalization and emergency care of patients with respiratory diseases** • **Steps in emergency care:** - **Respiratory resuscitation technique and stabilization measures** • **Specific therapeutic agents:** - **Decongestants** - **Antihistamines** - **Cough suppressants** - **Mucolytics/expectorants** - **Anti-asthma agents** - **Antimicrobial agents** - **Oxygen** • **Methods of postural drainage, bronchial clapping, steam inhalation and inhalational therapy** • **Technique of oro- and naso-pharyngo-tracheal lavage and suctioning** • **Principles of pulmonary rehabilitation**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
10. Provide health education to families to prevent occurrence of acquired heart disease and its complications (PO 1, 2, 5, 6, 8, 9, 10)	• **Effects of respiratory disease to the patient and his family and its implications to the community** • **Epidemiologic factors affecting the occurrence, spread and chronicity of respiratory disease** • **Role of medical, paramedical and traditional health providers in the management and control of respiratory disorders** • **Interaction and dynamics between the family and respiratory disease** • **Preventive and promotive measures**		

RHEUMATOLOGIC DISORDERS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the burden of illness of rheumatolgic disorders and their impact on quality of life (PO 1,2,4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **Actual patient encounters** • **In person and/or virtual:** - **Case management presentation** - **Lectures** - **Video presentation** - **Demonstration-return demonstration** - **Preceptorials** - **SGD/PBL** • **Bedside teaching** • **Ward rounds** • **Independent study period** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini CEX** **Summative:** • **Written exam** • **OSCE** • **CBD** • **Performance rating scale for:** **- SGD/PBL** **- Case management presentation** **- Preceptorials** **- Return demo** **- Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Distinguish between a benign musculoskeletal condition and a complaint that warrants further evaluation and management** **a. Explain the anatomic, physiologic basis of the condition** **b. Discuss the etiology, pathophysiology and clinical manifestations of the condition** **(PO 1,2)**	• **Benign conditions** • **(Growing pain, hypermobility syndromes) vs. pathologic limb pain** • **Mechanical vs inflammatory joint pain**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **3. Elicit an accurate and comprehensive history with focus on rheumatologic manifestations (PO 1, 2, 8, 9, 10)**	• **History-taking with emphasis on symptomatology suggestive of a rheumatologic disease:** - **Arthralgia vs arthritis** - **Common pediatric skin rashes vs. suspicious inflammatory rashes (vasculitis, malar rash, heliotrope rash)** - **Fever patterns suggestive of juvenile idiopathic arthritis (JIE), RF, other systemic inflammatory processes** - **Fatigue, tender points vs. chronic painful, inflammatory condition** • **Red flags in general pediatrics requiring further work-up or referral** • **Interviewing skills**		
PHYSICAL EXAMINATION **4. Perform a musculoskeletal exam on pediatric patients (PO 1, 2, 8, 9, 10)**	• **Thorough physical examination including neurologic** • **Pediatric gait, arms, legs, spine (pGALS) exam** • **Respect for patient safety, comfort and privacy**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
DIAGNOSIS **5. Diagnose a rheumatology condition based on history (signs of a rheumatologic condition) and abnormalities in the musculoskeletal exam** **a. Formulate differential diagnoses** **b. Utilize algorithms as guide in diagnosis** **(PO 1, 2, 8, 9, 10)**	• **Typical presentations found in:** - **Post-infectious arthritis (RF)** - **Henoch-Schonlein purpura** - **Kawasaki disease** - **Chronic rheumatologic condition (systemic lupus erythematosus [SLE], JIA, juvenile dermatomyositis)** • **Common differential diagnoses** • **Algorithms in the diagnosis of rheumatologic disorders**		
DIAGNOSTIC TESTING **6. Enumerate the commonly selected laboratory tests used to evaluate pediatric autoimmune disease** **a. Discuss their indications for use and limitations** **b. Interpret laboratory results** **(PO 1, 2, 8, 9, 10)**	• **Indications, limitations and interpretations of appropriate diagnostic examinations:** - **Blood examinations:** **a. CBC** **b. ESR** **c. Complement** **d. Urinalysis** **e. Rheumatoid factor** **f. ANA** **g. Anti-DNA** - **Imaging studies:** **a. Joint X-ray** **b. Joint MRI** **c. CT scan** **d. Ultrasound** **e. Bone scan (nuclear medicine study)**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **7. Formulate a basic management plan, including supportive, promotive, preventive and rehabilitative strategies** **a. Pharmacologic** **b. Non-pharmacologic** **c. Indications for referral** **(PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Principles of treatment** • **Commonly used drugs** • **Role of physical and occupational therapy, and routine eye exams** • **Use of antibiotic prophylaxis in lupus patients undergoing invasive procedures** • **Role of healthy eating behaviors, diet, and calcium with vitamin D supplementation in children on chronic glucocorticosteroid treatment** • **Role of sun protection in children with autoimmune diseases** • **Growth monitoring in children with chronic rheumatic disease** • **Importance of anticipatory guidance regarding risky behaviors and medical noncompliance in adolescents with chronic rheumatic diseases** • **Use of antibiotics in streptococcal diseases or with prior rheumatic fever to reduce the risk of new or recurrent rheumatic fever** • **Indications for referral**		

SECTION THREE: SELECTED TOPICS

ADOLESCENT DISORDERS AND RISK-TAKING BEHAVIORS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **CLINICAL CORRELATION** **1. Explain risk-taking behaviors among adolescents, contributory factors, and the impact of these behaviors on future health (PO 1, 2, 8, 9, 10)**	• **Risk-taking in the context of adolescent psychosocial and cognitive development** • **Top causes of mortality among 10-14 and 15-19-year olds from DOH** • **Non-Communicable Diseases (NCDs) in Filipino Adults (DOH)** • **Risk and protective factors** • **Statistics on sexual risk-taking (NDHS, YAFFS, DOH)** • **Statistics on smoking, alcohol, drug use, mental health, violence including bullying, online sexual exploitation of children or OSEC (DOH, YAFSS, GSHS, UNICEF)** • **Nutritional status (FNRI)** • **Inactivity/screen time**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture** - **Preceptorials** - **SGD** - **Role-play** - **Video presentation** - **Demonstration-return demonstration** • **Handout** • **OPD and ward rotation**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **OSCE** • **CBD** • **Reflection paper** • **Performance rating scale for:** **- Preceptorials** **- Return demo** **- SGD** **- Role-play**

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
HISTORY TAKING **2. Elicit a complete and accurate history, including the psychosocial history using the HEADSSS interview format (PO 1, 2, 8, 9, 10)**	• **Interviewing skills & communication skills** • **Process of an adolescent medical interview:** - **Initiating the session:** **a. Establish rapport** **b. Assure confidentiality and limits** **c. Interview the adolescent alone** - **Medical History Including menstrual and gynecologic history** - **Psychosocial Interview using HEEADSSS 3.0: Home, education/eating, activities, drugs, sexuality, suicide, safety** - **Identifying both risky behaviors and protective factors (strengths)**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **3. Perform a complete PE, including Sexual Maturation Rating (SMR) and neurologic examination (PO 1, 2, 8, 9, 10)**	• **Normal anatomy** • **BMI computation, plotting, interpretation using WHO charts** • **Vital signs and normal values for adolescents** • **Sexual maturation rating (SMR)** • **Getting consent from the adolescent** • **Respect for patient's privacy, confidentiality, need for chaperone**		
DIAGNOSIS **4. Diagnose an adolescent disorder based on findings in history and physical examination (PO 1, 2, 5, 6, 8, 9, 10)**	**Salient points in history and PE** **Common differential diagnoses** **Common laboratory tests for confirmation of diagnosis as needed**		
MANAGEMENT **5. Discuss appropriate management and anticipatory guidance to both the adolescent and parents (PO 1, 2, 4, 5, 6, 8, 9, 10)** **5.a. Discuss principles of Health Care Transition (PO 1, 2, 5, 7, 10)**	• **Pharmacologic and non-pharmacologic treatment** • **Growth and development,** • **Injury prevention** • **Healthy lifestyle (diet, physical activity)** • **Avoidance of smoking, alcohol and drug use** • **Responsible sexual behaviors** • **Mental Health** • **Health maintenance (immunization)** • **Limits on screen time** • **Principles of Health Care Transition**		

PEDIATRIC EMERGENCIES

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the global burden of emergency disease and conditions in the pediatric age group (PO 1,2,4)**	• **Epidemiology- incidence, prevalence, morbidity and mortality rates, economic impact**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture-discussion** - **Video presentation** - **Demonstration- return demonstration** - **Simulation** - **SGD/PBL** - **Preceptorials** • **Actual patient encounter** • **Self-instructional modules** • **Self-directed learning** • **Telemedicine (Teletriage)**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **Oral exam** • **Practical exam** • **CEC** • **OSCE** • **DOPS** • **Performance rating scale for:** - **SGD/PBL** - **Preceptorials** - **Return demo** - **Telemedicine**
BASIC SCIENCE AND CLINICAL CORRELATION **2. Recognize the seriously ill and/or injured child (PO 1, 2, 8, 9, 10)**	• **Basic principles of triaging** • **Age-related anatomy and normal physiology** • **Pattern recognition for physiological and clinical decompensation** • **High-risk clinical features**		
3. Discuss common childhood injuries and pattern of injuries based on etiology, mechanism of injury and clinical presentation (PO 1, 2, 8, 9, 10)	• **Etiology** • **Mechanism of injury** • **Clinical presentation of common childhood injuries:** - **Head injury** - **Fractures and soft tissue injury** - **Abdominal injury and blunt trauma** - **Pneumo-/hemothorax** - **Laceration and wound management** - **Emergency immunization (anti-rabies and anti-tetanus vaccine)** - **Motor vehicular accidents**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- Falls - Burns - Foreign body ingestion/obstruction - Poisoning and recreational drug ingestions - Drowning and near drowning - Animal bites and envenomation - Non-accidental injuries		
4. Discuss common pediatric medical emergencies (PO 1, 2, 8, 9, 10)	- Pathophysiology - Common pediatric medical emergencies and their causes: - Shock (hypovolemic, cardiogenic, distributive, obstructive) - Respiratory distress and failure (pulmonary and non-pulmonary causes) - Upper airway obstruction - Asthma and status asthmaticus - Bronchiolitis - Pneumonia - Pleural effusion - Rhythm disturbances - Congestive heart failure (congenital and acquired) - Critical congenital heart disease - Gastrointestinal bleeding - Abdominal pain		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- **Acute gastroenteritis and dehydration** - **Emergency fluid and electrolyte disturbances** - **Gut obstruction (partial and complete)** - **Renal failure (acute and chronic)** - **Urinary tract infection** - **Seizures and status epilepticus** - **Increased intracranial pressure** - **Central nervous system (CNS) infection** - **Decreased sensorium** - **Anaphylaxis** - **Sepsis and septic shock** - **Diabetic ketoacidosis** - **Metabolic emergencies: Congenital adrenal hyperplasia (CAH)** - **Genetic emergencies: Maple syrup urine disease (MSUD)** - **Ambiguous genitalia** - **Febrile neutropenia** - **Severe anemia and bleeding disturbances** - **The limping child** - **The immunocompromised child** - **Behavioral emergencies**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
5. Discuss common pediatric surgical emergencies based on etiology, pathophysiology and clinical presentation (PO 1, 2, 8, 9, 10)	• **Etiology** • **Pathophysiology** • **Clinical presentation of common pediatric surgical emergencies:** - **Common causes of acute abdomen and obstruction (acute appendicitis, intussusception, malrotation, volvulus)** - **Esophageal atresia** - **Tracheoesophageal fistula** - **Imperforate anus** - **Gastroschisis and omphalocoele** - **Diaphragmatic hernia** - **Acute scrotum and testicular torsion** - **Inguinal hernia** - **Post-operative adhesions** - **Surgical airway and airway obstruction** - **Phimosis and paraphimosis** - **Intracranial and abdominal masses** - **Biliary atresia**		
HISTORY TAKING **6. Elicit a complete history, focusing on the urgent complaint (PO 1, 2, 8, 9, 10)**	• **Complete pediatric history** • **Trauma: urgent complaint and the time, date, place and mechanism of injury** • **Interviewing skills** • **Communication skills**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **7. Perform a fast but thorough physical examination (PO 1, 2, 8, 9, 10)**	• **Thorough physical examination** • **Maneuvers and techniques to elicit objective findings**		
DIAGNOSIS **8. Diagnose common medical, surgical and traumatic pediatric emergencies based on history and physical examination (PO 1,2,5,6,8,9,10)**	• **Salient points in history and PE** • **Common differential diagnoses** • **Important diagnostic tools to confirm diagnosis:** - **serologic: CBC, specific tests for infections (influenza, Covid 19, Dengue NS1, etc.), blood culture** - **imaging: Chest X-ray, ultrasound, CT scan, MRI**		
MANAGEMENT **9. Discuss the initial plan of management for pediatric medical, surgical and traumatic emergencies** **a. Discuss complications and indications for referral** **b. Provide patient counseling/ education, including preventive/ anticipatory care** **(PO 1, 2, 4, 5, 6, 7, 8, 9, 10)**	• **Basic life support (infant, child and adolescent)** • **Principles of advance pediatric life support** • **Structured approach to the acutely-ill and/or injured child:** - **Primary impression** - **Primary survey** - **Secondary survey** - **Tertiary care, referrals and transfer** • **Specific emergency treatment for common emergencies** • **Common complications** • **Recognition and timely referral to specific subspecialties. other departments** • **Preventive/anticipatory care**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
10. Perform common pediatric emergency procedures **a. Institute initial emergency treatment to an acutely-ill child (first aid)** **(PO 1, 2, 8, 9, 10)**	• **Common pediatric emergency devices and equipment** • **Basic procedures:** - **Bag-mask ventilation** - **Airway adjunct placement-oropharyngeal and nasopharyngeal airways** - **IV cannulation** - **Nasogastric/orogastric tube placement** - **Lumbar puncture** - **Foley catheter insertion** - **Basic suturing and wound dressing** - **Spine and neck immobilization techniques** - **Hard collar application** - **Basic foreign body removal** - **Basic Life Support (BLS) for newborns/infants/older children/adolescents**		

ISSUES ON ENVIRONMENTAL PEDIATRICS AND POISONING

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Explain the concept of pediatric environmental health** **a. Discuss the burden of illness caused by environmental toxicants** **(PO 1, 2, 4)**	• **Pediatric environment health** • **Physical and human environment** • **Vulnerability of the pediatric age group to environmental toxins**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Lecture-discussion** - **SGD/PBL** - **Preceptorials** - **Role-play** - **Demonstration- return demonstration** - **Parents' class (lay lecture)** • **Bedside teaching** • **Actual patient encounters** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **Direct observation** • **OSCE** • **Performance rating scale for:** **- SGD/PBL** **- Role-play** **- Preceptorials** **- Return demo**
2. Discuss the vulnerability of children to environmental toxicants **(PO 1, 2)**	• **Critical windows of vulnerability in the different age groups**		
BASIC SCIENCE AND CLINICAL CORRELATION **3. Identify the common environmental threats to the health of children** **a. Discuss the clinical manifestations that appear due to exposure to these substances** **b. Discuss the pathophysiology of the toxicity** **c. Correlate anatomy and physiology with development of toxicity** **(PO 1, 2)**	• **Sources of exposure and clinical presentation of common toxicities:** - **Lead** - **Mercury** - **Arsenic** - **Indoor and outdoor air pollution** - **Environmental tobacco smoke** - **Pesticides** - **Drinking water contamination** - **Endocrine disruptors** - **Food contaminants** - **Herbs, dietary supplements** - **Noise** - **Electric and magnetic fields** - **Ionizing radiation** - **Biphenyls and dioxin**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Clinical manifestations when exposed to toxicants • Pathophysiology • Anatomy and physiology involved		
HISTORY TAKING 4. Elicit an accurate and comprehensive history in a child exposed to a toxicant (PO 1, 2, 8, 9, 10)	Complete medical history, including an environmental history and identified toxicant		
PHYSICAL EXAMINATION 5. Recognize specific physical examination findings that may signal environment toxicant exposure (PO 1, 2, 8, 9, 10)	• Physical examination findings under the following: - Pallor - Cyanosis - Hyperkeratosis - Chloracne - Mee's lines - Gingival lines - Wheezing - Chronic abdominal pain and colic - Diarrhea - Seizures - Attention deficit-hyperactivity disorders - Development delays		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
MANAGEMENT **6. Integrate environmental issues or concerns into health supervision (i.e., well and sick child visits, continuity clinic, in-patients, etc.)** **a. Provide anticipatory guidance to prevent and abate exposures** **(PO 1, 2, 5, 6, 8, 9, 10)**	• **Daily environmental issues or concerns** • **Diet** • **Hobbies** • **Child and adolescent employment** • **Preventive measures/ anticipatory care**		
7. Apply the principles of risk assessment to common environmental toxicants (PO 1, 2, 8, 9, 10)	• **Principles in risk assessment**		
8. Demonstrate the skills for risk communication in relation to environmental pediatrics (PO 1, 2, 8, 9, 10)	• **Communication skills**		
ADVOCACY **9. Encourage parents to seek solutions to their environmental concerns through education from their health care provider local and national resources and organizations (PO 1, 2, 8, 9, 10)**	• **Health education** • **Environmental health advocacy**		

ETHICAL ISSUES IN PEDIATRICS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Discuss basic concepts in medical ethics (PO 1, 2)	• Faith theory in relation to medicine • The human person as an individual requiring dignity and respect • Rights of children	• (Note: Select appropriate item/s from list/menu below) • In person and/or virtual: - Lecture-discussion - SGD/PBL - Conference - Debate - Case study - Seminar-workshop - Reporting • Bedside teaching • Actual patient contact • Project	• (Note: Select appropriate item/s from list/menu below) Formative: • Mini-CEX Summative: • Written exam • Oral exam • OSCE • Written report • Reflection paper • MSF • Performance rating scale for: - SGD/PBL - Case study - Reporting - Project
2. Explain the bioethical principles (PO 1, 2)	• Bioethical principles: • Autonomy/paternalism • Informed consent • Truth telling • Stewardship • Withholding information, privacy and confidentiality • Beneficence and maleficence • Double effect • Totality • Cooperation • Justice		
3. Apply the principles of medical ethics in physician-patient relationship (PO 1, 2, 8)	• Oath of Hippocrates • World Medical Association/Professional Regulation Commission/Philippine Medical Association/Philippine Pediatric Society Code of Ethics • Physician-physician relationship (consult and referrals)		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• Physician-nurse relationship • Physician-student relationship • Assent of children • Truth telling and professional secrecy • Proxy decision-making and informed consent • Issues regarding professional fees and honoraria		
4. Elaborate on principles of ethics in physician-God relationship (PO 1, 2, 8)	• Allocation of scarce resources/poverty-related issues • Relationship with pharmaceutical firms • Virtues of a physician • Rights to religious belief		
5. Discuss issues regarding life, death and dying (PO 1, 2, 5, 6, 8, 9, 10)	• Sanctity of life • Care of terminally-ill child: palliative/hospice care, multidisciplinary approach • Care of defective newborn/special children • Withdrawing and withholding life-prolonging treatment • Ethical and legal issues in organ transplantation		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
6. Discuss ethical and legal issues involving research in children (PO 1, 2, 4, 8, 9, 10)	• **Legal issues**		
7. Discuss the Human Genome project (PO 1, 2, 4, 8)	• **Implication of gene therapy** • **Advantage and disadvantages of screening and counseling**		
8. Recognize the role of Bioethics Committee/Institutional Review Board (IRB) (PO 1, 2, 4, 8)	• **Guidelines and protocols of the Bioethics Committee** • **Guidelines and protocols of the Institutional Review Board**		
9. Demonstrate ethical and professional practice in all dealings with patients, their families and the other members of the healthcare team (PO 1, 2, 8, 9, 10)	• **Ethical principles** • **Professionalism**		
10. Demonstrate ethical and professional practice in the use of digital technology in health care (PO 1, 2, 8, 9, 10)	• **Principles of telemedicine** • **Various digital forms of communication** • **Platforms** • **Ethics behind use of technology**		

ISSUES ON FLUIDS AND ELECTROLYTES

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
1. Discuss the different compositions of body fluids (PO 1, 2)	• Total body fluid compartments • Implications in disease management	• (Note: Select appropriate item/s from list/menu below) • In person and/or virtual: - Lecture-discussion - Case discussion - Preceptorials - Exercises • Take home assignments	• (Note: Select appropriate item/s from list/menu below) Formative: • Rating scale for exercises Summative: • Written exams • Written report • Performance rating scale for: - Case discussion - Preceptorials
2. Differentiate osmolality, osmolarity and tonicity (PO 1, 2)	• Definition of: - Osmolality - Osmolarity - Tonicity • Differences among the three (3) terms • Role in fluid and electrolyte management		
3. Discuss intravenous fluid (IVF) composition (PO 1, 2)	• Electrolyte composition • Physiology of isotonic, hypotonic, and hypertonic dehydration • Different types of IVF and their composition		
4. Compute for fluid and electrolyte requirements in different clinical conditions (PO 1, 2)	• Computations for deficit, maintenance, and replacement therapy • Normal electrolyte values • Common conditions: prerenal conditions including acute gastro-enteritis (AGE), burns, blood loss, septic conditions		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
5. Discuss the different types of dehydration and management for each (PO 1, 2)	• **Definition of dehydration and its different classifications** • **Basic management plans** - **type of fluid required for replacement** - **computation for amount lost and for replacement** - **manner of replacement**		
6. Discuss the different electrolyte disorders and their clinical manifestations (PO 1, 2)	• **Common electrolyte disorders** • **Computations for maintenance and correction of different electrolytes**		
7. Formulate a management plan for the different electrolyte disorders (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **Common electrolyte disorders and their causes, clinical manifestations and intervention** - **pharmacologic** - **non-pharmacologic** - **complications** • **Management of fluid and electrolyte disturbances in different clinical scenarios**		
8. Recognize clinical indications for referral (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **Conditions that require referral**		

ISSUES IN CLINICAL GENETICS

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
BURDEN OF DISEASE **1. Discuss the burden of genetic disorders in childhood (PO 1, 2, 4)**	• **Health impact of birth defects and inborn errors of metabolism locally (incidence, diagnostic delays, barriers/challenges to effective genetic services)**	• **(Note: Select appropriate item/s from list/menu below)** • **In person and/or virtual:** - **Interactive lecture** - **Video presentation** - **SGD/ PBL** - **Journal report** - **Preceptorials** • **Bedside Teaching** • **Actual patient encounters** • **Telemedicine**	• **(Note: Select appropriate item/s from list/menu below)** **Formative:** • **Mini-CEX** **Summative:** • **Written exam** • **OSCE** • **CEC** • **CBD** • **Performance rating scale for:** **- SGD/PBL** **- Preceptorials** **- Telemedicine** **- Journal report**
BASIC SCIENCE CORRELATION **2. Recognize the role of genetic factors in health and disease (PO 1, 2)**	• **General organization of the human genome and the structure and function of genes:** - **Human genome, gene, gene activity during development and in normal and pathological cell function** - **Patterns of Mendelian inheritance** - **Patterns of non-Mendelian inheritance** - **Nature of mutations and how they contribute to human genetic variation and disease** - **Factors that affect the development of the phenotype in single gene disorders including variable expressivity and incomplete penetrance**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	• **Genes and diseases:** - **Clinical manifestations of common Mendelian disorders** - **Basic principles of inborn errors of metabolism** - **Principles of multifactorial inheritance** - **How genes interact with other genes and how various environmental factors contribute to disease** - **Epigenetics** • **Chromosomes and chromosomal abnormalities:** - **Organization of genes into chromosomes, chromosomal replication in mitosis and meiosis, transmission of chromosomes from parent to child** - **Clinical features of common numerical (deletions, duplications), structural (translocation) and mosaic chromosomal abnormalities** • **Population genetics:** - **How principles of population genetics account for varying frequencies of particular mutations in populations, effects of consanguinity and continuing occurrence of new mutations**		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
	- Population screening for genetic disease (newborn screening, carrier screening, pre-symptomatic screening) - Ethical issues in genetics		
CLINICAL CORRELATION 3. Recognize the common childhood genetic disorders a. Identify common features of various disorders and their associated signs and symptoms (PO 1, 2, 8, 9, 10)	• Features of common chromosomal disorders (Down Syndrome, Edward Syndrome, Patau Syndrome) • Features of metabolic disorders included in newborn screening: MSUD, PKU, GA1, FAOD • Common enzyme deficiencies: G6PD		
4. Identify patients with strong inherited predispositions to common genetic disease a. Discuss etiology and pathophysiology (PO 1, 2, 8, 9, 10)	• Mendelian and non-Mendelian disorders • Chromosomal abnormalities • Inborn errors of metabolism • Ethical issues		
HISTORY TAKING 5. Elicit a comprehensive history with emphasis on birth/maternal and family medical history in a child with a possible genetic problem (PO 1, 2, 8, 9, 10)	• Features in a patient's medical history that suggest the presence of a genetic disease • Family history with pedigree using appropriate and acceptable symbols • Patterns of inheritance and other signs suggestive of a genetic disease in a family history		

LEARNING OUTCOMES	CONTENT	TEACHING-LEARNING ACTIVITIES	EVALUATION
PHYSICAL EXAMINATION **6. Perform a thorough physical and neurologic examination (PO 1, 2, 8, 9, 10)**	• **Features in the physical and neurologic examination or laboratory investigations that suggest the presence of a genetic disease**		
DIAGNOSIS **DIAGNOSTIC TESTING** **7. Diagnose the genetic condition with the use of appropriate screening and other diagnostic tests (PO 1, 2, 8, 9, 10)**	• **Screening tests: newborn screening** • **Diagnostic tests for various genetic conditions (including genomics)**		
MANAGEMENT **8. Discuss the appropriate management of genetic conditions (PO 1, 2, 4, 5, 6, 8, 9, 10)**	• **Principles of management of genetic conditions including available treatment (pharmacologic and non-pharmacologic)** • **Basics of genetic counseling**		
9. Discuss ways to prevent genetic disorders (PO 1, 2, 4, 5, 6, 8, 9, 10)	• **Prevention of genetic disorders:** - **Folic acid** - **Genetic counseling** - **Birth defects surveillance initiatives** • **Ethical issues in genetics**		

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(Note: To include future publications.)

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