

Macao Polytechnic Institute
School of Health Sciences and Sports
Bachelor of Science in Nursing

Module Outline

Academic Year 2021 / 2022 Semester 1

Learning Module	Pediatric Nursing			Class Code	NPED2101
Pre-requisite(s)	NFUN1101, NFUN1102				
Medium of Instruction	Cantonese and English			Credit	3
Lecture Hours	38 hrs	Lab/Practice Hours	7 hrs	Total Hours	45 hrs
Instructor	LUO, Zhimin Glenn (Module Teacher) POON, Chiu Yin Angela		E-mail	glennluo@ipm.edu.mo angelapoon@ipm.edu.mo	
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Description

Pediatric Nursing is the practice of nursing involved in the health care of children from infancy through adolescence. In this course, students would learn developmental issues during childhood, and fundamental knowledge and skills of health promotion and disease prevention as well as direct nursing care for children and their families.

Learning Outcomes

After completing the course, students will be able to:

1. Describe the major concepts, components, issues, and tasks involved in pediatric nursing.
2. Identify growth and development, and influencing factors through infancy to childhood.
3. Demonstrate knowledge and skill of health supervision, health assessment, health promotion and disease prevention for children and their families.
4. Utilize knowledge and skill to implement nursing care for the child with a health problem.

Content

1. Introduction of pediatric nursing (1 class hours)

- 1.1 Job description
- 1.2 Pediatric nursing: scope and standard of practice
- 1.3 Ethical and legal issues

(Describe roles and job for pediatric nurses; Describe scope and standard of practice; analyze and judge ethical and legal issues in practice.)

2. Growth and development of children (3 class hours)

- 2.1 Age groups
- 2.2 Concepts of growth and development
- 2.3 Principles of growth and development
- 2.4 Factors influencing growth and development
- 2.5 Development of psychosocial function and personality
- 2.6 Role of play in development

(Demonstrate an understanding the concepts of growth and development in children; Identify the principles and factors influencing growth and development; Demonstrate an understanding major theories of growth and development in children and role of play in development)

3. Health assessment of children (2 class hours)

- 3.1 Communication with children
- 3.2 Health history
- 3.3 Sequence of the physical examination
- 3.4 Case study

(Demonstrate an understanding of the appropriate health history to obtain from the child and the parent or primary caregiver; Demonstrate communication skills with children; Describe the appropriate sequence of the physical examination in the context of the child's developmental stage; Demonstrate skill to perform a health assessment using approaches that relate to the age and developmental stage of the child.)

4. Nursing care of children during illness and hospitalization (2 class hours)

- 4.1 Stressors of hospitalization
- 4.2 Factors affecting a child's response to illness and hospitalization
- 4.3 The nurse's role in caring for hospitalized children
- 4.4 Nursing care plan

(Identify the reactions and responses of children and their families during illness and hospitalization; Explain the factors that influence the reactions and responses of children and their families during illness and hospitalization; Describe the nursing care that minimizes the stressors of children who are ill or hospitalized; Demonstrate skill to perform a nursing care plan for hospitalized children.)

5. Nursing care during a pediatric emergency (2 class hours)

- 5.1 Factors contributing to emergency situations
- 5.2 Common treatments and medications
- 5.3 Health history of a child in an emergency situation
- 5.4 Rapid cardiopulmonary assessment
- 5.5 Common laboratory and other diagnostic tests
- 5.6 Nursing diagnoses and related interventions
- 5.7 Assessment and management of the most common types of emergencies

(Identify factors contributing to emergency situations among children; Discuss common treatments and medications used during pediatric emergencies; Conduct a health history of a child in an emergency situation, specific to the emergency; Perform a rapid cardiopulmonary assessment; Discuss common laboratory and other diagnostic tests used during pediatric emergencies; Identify nursing diagnoses and related interventions; Discuss assessment and management of the most common types of emergencies in children.)

6. Pain management in children (2 class hours)

- 6.1 Physiology of pain
- 6.2 Factors influencing pain
- 6.3 Developmental consideration
- 6.4 Nursing process overview for the child in pain
- 6.5 Management of pain

(Identify the major physiologic events associated with the perception of pain; Discuss the factors that influence the pain response; Identify the developmental consideration of the effects and management of pain in children; Explain the principles of pain assessment as they related to children; Understand the use of the various pain rating scales and physiologic monitoring for children; Develop a nursing care plan for children related to management of pain.)

7. Test (2 class hours)

8. Nursing care of high-risk newborn (3 class hours)

- 8.1 Classification of newborns
- 8.2 Nursing care of high-risk newborns
- 8.3 Nursing care of preterm infants
- 8.4 Nursing care of newborns with jaundice

(Describe classification of newborns and characteristics of normal newborns; Identify high-risk newborns and describe classification of high-risk newborns; Demonstrate skill to perform general nursing process for high-risk newborns; Describe factors related to preterm infants; Identify characteristics of preterm infants; Develop an individualized nursing care plan for preterm infants; Describe classification of jaundice (hyperbilirubinemia) and related risk factor; Develop an individualized nursing care plan for newborns with jaundice.)

9. Nursing care of the child with a cardiovascular disorder (3 class hours)

- 9.1 Anatomic and physiologic differences of the cardiovascular system
- 9.2 Psychosocial impact of chronic cardiovascular disorders on children
- 9.3 Individualized nursing care plan for the child with congenital heart disease
- 9.4 Patient/family teaching plans for the child with congenital heart disease
- 9.5 Congestive heart failure

(Compare anatomic and physiologic differences of the cardiovascular system in infants and children versus adults; Describe manifestations and treatment of congenital heart disease; Develop an individualized nursing care plan for the child with congenital heart disease; Analyze the relationship between pathophysiology and manifestations of congestive heart failure; Point out nursing management for the child with congestive heart failure.)

10. Nursing care of the child with a respiratory disorder (4 class hours)

- 10.1 Anatomy and physiology of the respiratory system in children
- 10.2 Different respiratory illnesses
- 10.3 Nursing interventions
- 10.4 Individualized nursing care plan
- 10.5 Patient/family teaching plans

(Compare how the anatomy and physiology of the respiratory system in children differs from that of adults; Distinguish different respiratory illnesses based on the signs and symptoms associated with them; Discuss nursing interventions commonly used for respiratory illnesses; Devise an individualized nursing care plan for the child with a respiratory disorder; Develop patient/family teaching plans for the child with a respiratory disorder.)

11. Nursing care of the child with a gastrointestinal disorder (2 class hours)

- 11.1 The differences in the anatomy and physiology
- 11.2 Common gastrointestinal illnesses of childhood
- 11.3 Nursing intervention
- 11.4 Individualized nursing care plan
- 11.5 Teaching plans for family/patient education

(Compare the differences in the anatomy and physiology of the gastrointestinal system between children and adults; Distinguish common gastrointestinal illnesses of childhood; Discuss nursing interventions commonly used for gastrointestinal illnesses; Devise an individualized nursing care plan for infants/children with diarrhea; Develop teaching plans for family/patient education for children with diarrhea.)

12. Nursing care of the child with an infectious disease (2 class hours)

- 12.1 Anatomic and physiologic differences in children
- 12.2 Nursing assessments and interventions
- 12.3 Various infectious illnesses occurring in childhood

12.4 Individualized nursing care plan

12.5 Patient/family teaching plans

(Discuss anatomic and physiologic differences in children versus adults in relation to the infectious process; Distinguish various infectious illnesses occurring in childhood; Identify appropriate nursing assessments and interventions related to medications and treatments for childhood infectious and communicable disorders; Devise an individualized nursing care plan for the child with an infectious or communicable disorder; Develop patient/family teaching plans for the child with an infectious or communicable disorder.)

13. Immunization and Vaccination (2 class hours)

13.1 Concepts of immunization and vaccination

13.2 Recommended Children Schedule

13.3 Nursing assessments and interventions

13.4 Patient/family teaching plans

(Understand the difference between concepts of immunization and vaccination; Discuss the Macau SAR Immunization Program – Recommended Children Schedule; Identify appropriate nursing assessments and interventions related to vaccinations; Develop patient/family teaching plans for management of adverse reactions post-vaccinations.)

14. Nursing care of the child with an immunologic disorder (2 class hours)

14.1 Appropriate nursing assessments and interventions

14.2 Individualized nursing care plan

14.3 Patient/family teaching plans

(Explain anatomic and physiologic differences of the immune system in infants and children versus adults; Distinguish immune and autoimmune disorders common in infants, children, and adolescents; Identify appropriate nursing assessments and interventions related to medications and treatments for pediatric immune, autoimmune, and allergic disorders; Develop patient/family teaching plans for the child with an immune or autoimmune disorder.)

15. Nursing care of the child with a genetic disorder (2 class hours)

15.1 Genetic disorders introduction

15.2 Individualized nursing care plan

15.3 Patient/family teaching plans

(Discuss various inheritance patterns; Distinguish various genetic disorders occurring in childhood; Identify nursing interventions related to common laboratory and diagnostic tests used in the diagnosis and management of genetic conditions; Devise an individualized nursing care plan for the child with a genetic disorder; Develop patient/family teaching plans for the child with a genetic disorder.)

16. Nursing care of the child with musculoskeletal and neuromuscular disorders (2 class hours)
- 16.1 Anatomy and physiology of the musculoskeletal and neuromuscular system in children
 - 16.2 Musculoskeletal and neuromuscular illnesses occurring in childhood
 - 16.3 Nursing assessments and interventions related to medications and treatments
 - 16.4 Patient/family teaching plans

(Compare difference between the anatomy and physiology of the musculoskeletal and neuromuscular system in children versus adults; Distinguish various musculoskeletal and neuromuscular illnesses occurring in childhood; Identify appropriate nursing assessments and interventions related to medications and treatments used for childhood musculoskeletal or neuromuscular conditions; Develop patient/family teaching plans for the child with musculoskeletal or neuromuscular disorders.)

17. Final Exam (2 class hours)

Practice 1 (2 hours)

18. Laboratory practice: pediatric assessment (Class A: September 10 (Fri) at 11:00-13:00; Class B: November 3 (Wed) at 14:30-16:30, 2021)

(Demonstrate the skills in measuring physical growth and development; Assess and evaluate developmental status in children using developmental tools)

Practice 2 (2 hours)

19. Laboratory practice: medication management (Class A: September 16 (Thur) at 09:00-11:00; Class B: November 4 (Thur) at 09:00-11:00, 2021)

- 19.1 Atraumatic methods for preparing children for procedures
- 19.2 “Eight rights” of pediatric medication administration
- 19.3 Physiologic differences in children
- 19.4 Recommended pediatric medication doses
- 19.5 Proper technique for administering medication
- 19.6 Atraumatic care in medication administration for children
- 19.7 Preferred sites for peripheral and central intravenous medication administration
- 19.8 Nursing management

(Describe the “8 rights” of pediatric medication administration; Accurately determine recommended pediatric medication doses; Demonstrate the proper technique for administering medication to children via the oral, rectal, ophthalmic, otic, intravenous, intramuscular, and subcutaneous routes; Identify the preferred sites for peripheral and central intravenous medication administration; Describe nursing management related to maintenance of intravenous infusions in children, as well as prevention of complications.)

Practice 3 (3 hours)

20. Group presentation: Class A on October 29 (Fri) at 09:00-12:00, and Class B on November 25 (Thur) at 09:00-12:00, 2021.

Every class students will divide into 5 groups by students themselves. Every group selects a different topic related to child health and pediatric nursing and present by group. PowerPoint will be accepted as the presentation type. The length of presentation is 20 minutes, and plus 5 minutes for discussion at the end of each presentation.

Criteria of Grading:

Theoretical input (50%)		
Contents: relevant to the chosen topic, with appropriate width and depth	10%	/10
Structure: well organized, clear	20%	/20
Source of information: authoritative, up-to-date, with sound evidence, well acknowledged	20%	/20
Presentation skill (50%)		
Fluency and comprehensibility of speech (20%):		
➤ Use appropriate body language	5%	/5
➤ Speak fluently at normal speed and loud enough	5%	/5
➤ Have good timing	5%	/5
➤ Employ attractive presentation style	5%	/5
Effectiveness of classroom discussion	10%	/10
Use of audio-visual aid	10%	/10
Teamwork	10%	/10
	Total 100%	Total Mark: <hr/>

Teaching Method

Lectures, Lab practice, Discussion, Case studies, Videos

Attendance

Attendance requirements are governed by the “Academic Regulations Governing Bachelor’s Degree Programmes of Macao Polytechnic Institute”. Students are not eligible to attend the final examination and re-sit examination if the absence rate exceeds 30%. Moreover, an “F” will be given as the final grade to students who have less than the stated attendance for this enrolled learning module.

Assessment

This learning module is graded on a 100 point scale, with 100 being the highest possible score and 50 the pass score.

Any students scoring less than 35% of the total mark in the final examination will be given an “F” grade for the learning module even if the overall grade is 50% or higher.

	Item	Description	Percentage
1.	Classroom performance	Participation and exercise	10 %
2.	Test	Mid-term test: Session 1, 2, 3, 4, 5, 6	20 %
3.	Group presentation	Select a topic and present by group	20 %
4.	Skill exam	Pediatric Assessment & Vaccination	10 %
5.	Final exam	Closed book examination: All sessions	40 %
		Total Percentage:	100 %

References:

Reference books

1. Kyle, T., & Carmon, S. (2017). *Essentials of Pediatric Nursing* (3rd ed.). Philadelphia: Wolters Kluwer.
2. Hockenberry, M.J., Wilson, D., & Rodgers, C.C. (2017). *Wong's Essentials of Pediatric Nursing* (10th ed.). St. Louis: Elsevier.
3. 陳月枝等 (編) (2017)。實用兒科護理 (第 8 版)。台灣：華杏。
4. 崔焱，仰曙芬 (編) (2017)。兒科護理學 (第 6 版)。北京：人民衛生。

Websites

1. World Health Organization Health Topics: <http://www.who.int/topics/en/>
2. Macao Health Bureau Child Health: <http://www.ssm.gov.mo/childhealth/>

Pediatric Nursing (NPED2101-211) Timetable (02JUL2021) Class A

Session	Date	Time	Topics	Teacher(s)
1	20/8/2021 (Fri)	11:00-13:00	Introduction to pediatric nursing Growth and development (1)	Glenn LUO
2	26/8/2021 (Thur)	14:30-16:30	Growth and development of children (2)	Glenn LUO
3	27/8/2021 (Fri)	11:00-13:00	Health assessment of children	Glenn LUO
4	2/9/2021 (Thur)	11:00-13:00	Nursing care of children during illness and hospitalization	Glenn LUO
5	3/9/2021 (Fri)	11:00-13:00	Nursing care during a pediatric Emergency	Glenn LUO
6	9/9/2021 (Thur)	09:00-11:00	Pain Management in Children	Glenn LUO
7	10/9/2021 (Fri)	11:00-13:00	Laboratory practice: pediatric assessment	Glenn LUO Angela POON
8	16/9/2021 (Thur)	09:00-11:00	Laboratory practice: medication management	Angela POON Glenn LUO
9	17/9/2021 (Fri)	11:00-13:00	Nursing care of high-risk newborn(1)	Glenn LUO
10	23/9/2021 (Thur)	09:00-11:00	Test	Glenn LUO
11	24/9/2021 (Fri)	11:00-13:00	Nursing care of high-risk newborn(2) Nursing care of the child with a cardiovascular disorder (1)	Glenn LUO
12	30/9/2021 (Thur)	09:00-11:00	Nursing care of the child with a cardiovascular disorder (2)	Glenn LUO
13	7/10/2021 (Thur)	09:00-11:00	Nursing care of the child with a respiratory disorder (1)	Angela POON
14	8/10/2021 (Fri)	11:00-13:00	Nursing care of the child with a respiratory disorder (2)	Angela POON
15	15/10/2021 (Fri)	11:00-13:00	Nursing care of the child with a gastrointestinal disorder	Angela POON
16	18/10/2021 (Mon)	09:00-11:00	Nursing care of the child with an infectious disease	Angela POON
17	21/10/2021 (Thur)	09:00-11:00	Immunization and Vaccination	Angela POON
18	22/10/2021 (Fri)	11:00-13:00	Nursing care of the child with an immunologic disorder	Angela POON
19	25/10/2021 (Mon)	09:00-11:00	Nursing care of the child with a genetic disorder	Angela POON
20	26/10/2021 (Tue)	09:00-11:00	Nursing care of the child with Musculoskeletal and Neuromuscular Disorders	Angela POON
21	29/10/2021 (Fri)	09:00-12:00	Group presentation	Glenn LUO
22	9/12/2021 (Thur)	11:00-13:00	Final Exam	Glenn LUO

Pediatric Nursing (NPED2101-212) Timetable (02JUL2021) Class B

Session	Date	Time	Topics	Teacher(s)
1	24/8/2021 (Tue)	09:00-11:00	Introduction to pediatric nursing Growth and development (1)	Glenn LUO
2	31/8/2021 (Tue)	09:00-11:00	Growth and development of children (2)	Glenn LUO
3	7/9/2021 (Tue)	09:00-11:00	Health assessment of children	Glenn LUO
4	14/9/2021 (Tue)	09:00-11:00	Nursing care of children during illness and hospitalization	Glenn LUO
5	20/9/2021 (Mon)	11:00-13:00	Nursing care during a pediatric Emergency	Glenn LUO
6	1/11/2021 (Mon)	11:00-13:00	Pain Management in Children	Glenn LUO
7	3/11/2021 (Wed)	14:30-16:30	Laboratory practice: pediatric assessment	Glenn LUO Angela POON
8	4/11/2021 (Thur)	09:00-11:00	Laboratory practice: medication management	Angela POON Glenn LUO
9	9/11/2021 (Tue)	09:00-11:00	Nursing care of high-risk newborn(1)	Glenn LUO
10	10/11/2021 (Wed)	11:00-13:00	Test	Glenn LUO
11	11/11/2021 (Thur)	09:00-11:00	Nursing care of high-risk newborn(2) Nursing care of the child with a cardiovascular disorder (1)	Glenn LUO
12	12/11/2021 (Fri)	11:00-13:00	Nursing care of the child with a cardiovascular disorder (2)	Glenn LUO
13	15/11/2021 (Mon)	09:00-11:00	Nursing care of the child with a respiratory disorder (1)	Angela POON
14	16/11/2021 (Tue)	09:00-11:00	Nursing care of the child with a respiratory disorder (2)	Angela POON
15	17/11/2021 (Wed)	11:00-13:00	Nursing care of the child with a gastrointestinal disorder	Angela POON
16	18/11/2021 (Thur)	09:00-11:00	Nursing care of the child with an infectious disease	Angela POON
17	19/11/2021 (Fri)	11:00-13:00	Immunization and Vaccination	Angela POON
18	22/11/2021 (Mon)	09:00-11:00	Nursing care of the child with an immunologic disorder	Angela POON
19	23/11/2021 (Tue)	09:00-11:00	Nursing care of the child with a genetic disorder	Angela POON
20	24/11/2021 (Wed)	11:00-13:00	Nursing care of the child with Musculoskeletal and Neuromuscular Disorders	Angela POON
21	25/11/2021 (Thur)	09:00-12:00	Group presentation	Glenn LUO
22	9/12/2021 (Thur)	11:00-13:00	Final Exam	Angela POON