

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

Module Outline
Academic Year 2021 / 2022 Semester 2

| | | | | |
|------------------------------|--|---------------------------|-------------------|---|
| Learning Module | Medical-Surgical Nursing (II) | | Class Code | NMAS2102 |
| Pre-requisite(s) | NFUN1101, NFUN1102 | | | |
| Medium of Instruction | Chinese/English | | Credit | 5 |
| Lecture Hours | 71 hrs | Lab/Practice Hours | 4 hrs | Total Hours 75 hrs |
| Instructor | Dr. Hsu Mei Hua (Subject teacher) Dr. Lang Bin Dr. Dai Hongxia Dr. WANG Yan | | E-mail | kerryhsu@ipm.edu.mo blang@ipm.edu.mo hxdai@ipm.edu.mo ywang@ipm.edu.mo |
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Description

This 75-hour subject aims to provide a basic understanding of common health problems in the adult clients with medical-surgical diseases and their care. It covers the essential concepts of nursing care related to common acute or chronic illnesses, such as infectious diseases, musculoskeletal diseases, urinary diseases, neurological diseases, eye diseases, otolaryngological diseases, hematological diseases, and oncological diseases. The definitions, pathophysiology/etiology, risk factors, clinical manifestations, diagnostic investigations, treatments principles, nursing management and health education for the clients with evidence-based information are included. The nursing process is used as the framework to develop students' clinical reasoning and judgment. Teaching strategies include lectures, case studies, discussion, audio-visuals, class exercise, as well as nursing skill laboratory sessions.

Learning Outcomes

At the end of this subject, the students should be able to:

1. Describe the anatomy, altered physiology, signs and symptoms, and diagnostic tests of adult clients with above-listed diseases;
2. Describe the medical and nursing interventions for problems with above-listed diseases;
3. Demonstrate the skills of assessment of above-listed diseases.
4. Describe the nurse's role in medical-surgical therapy, nutritional therapy, drug therapy, and psychosocial care for clients with above-listed diseases;
5. Develop nursing care plans for clients with medical or surgical treatment;
6. Identify and provide health education for clients with above-listed diseases; and
7. Exercise critical thinking in caring for clients with above-listed diseases.

Contents

Theory (71 hours)

1. Infectious disorder (4 hours)
 - 1.1 Introduction, pathogenesis and infection control: IDENTIFICATION: the definition of infection. COMPREHENSION: the process of infection, risk of hospitalization. APPLICATION: prevent and control infection. (2 class hours)
 - 1.2 Acquired immunodeficiency syndrome: IDENTIFICATION: definition, etiology and risk factors. COMPREHENSION: classification, clinical manifestations, treatments, nursing assessment, nursing diagnosis, nursing interventions and health education. APPLICATION: apply knowledge to analyze the clinical case of AIDS and make a reasonable nursing care plan. (2 class hours)
2. Musculoskeletal system (10 hours)
 - 2.1 Musculoskeletal system: introduction, assessment & diagnostic tests: IDENTIFICATION: structure and function of musculoskeletal system. COMPREHENSION: mechanism of complications, nursing assessment and diagnostic tests. (2 class hours)
 - 2.2 Limb fracture: IDENTIFICATION: definition, etiology and risk factors. COMPREHENSION: classification, clinical manifestations, treatments, nursing assessment, nursing diagnosis, nursing interventions and client teaching. APPLICATION: apply knowledge to analyze the clinical case of limb fracture and make a reasonable nursing care plan. (2 class hours)
 - 2.3 Suppurative osteomyelitis: IDENTIFICATION: definition, etiology and risk factors, pathophysiology. COMPREHENSION: classification, clinical manifestations, treatments, nursing assessment, nursing diagnosis, nursing interventions and client teaching. APPLICATION: apply knowledge to analyze the clinical case of suppurative osteomyelitis, make a reasonable nursing care plan. (2 class hours)
 - 2.4 Prolapse of lumbar intervertebral disk: IDENTIFICATION: etiology and risk factors, pathophysiology, classification. COMPREHENSION: clinical manifestations, treatments, nursing assessment, nursing diagnosis, nursing interventions and client teaching.

APPLICATION: apply knowledge to analyze the clinical case of prolapse of lumbar intervertebral, make a reasonable nursing care plan. (2 class hours)

- 2.5 Total hip replacement, cast care & traction: IDENTIFICATION: definition and classification. COMPREHENSION: clinical manifestations, treatments, nursing assessment, nursing diagnosis, nursing interventions and client teaching. APPLICATION: apply knowledge to analyze the clinical case of total hip replacement, cast care and traction, make a reasonable nursing care plan. (2 class hours)

3. Eye Disorders & otolaryngological disorders (4 hours)

- 3.1 Eye disorders: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)

- 3.2 Otolaryngological disorders: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)

(COMPREHEND: compare pathophysiology and clinical manifestations of cataract.

UNDERSTAND: memorize clinical manifestations of cataract. **MASTER:** apply knowledge to analyze problems in cataract. Make correct nursing diagnosis and nursing intervention.)

4. Neurological System Disorder (10 hours)

- 4.1 Introduction, assessment & diagnostic tests of neurological system. (2 class hours)

- 4.2 Head Injuries: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)

- 4.3 Cerebrovascular Accident: classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)

- 4.4 Meningitis, seizure: classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours).

- 4.5 Parkinson's Disease & Alzheimer's Disease: classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)

(COMPREHEND: compare pathophysiology and clinical manifestations of neurological system disorder. **UNDERSTAND:** memorize clinical manifestations of neurological system

disorder. **MASTER:** apply knowledge to analyze problems in neurological system disorder. Make correct nursing diagnosis and nursing intervention.)

5. Hematologic system disorders (8 hours)

- 5.1 Introduction, assessment & diagnostic tests of hematologic system. Care of client undergoing bone marrow transplantation. (2 class hours)
- 5.2 Anemia: classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching (2 class hours)
- 5.3 White Blood Cells disorders, leukemia: classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours).
- 5.4 Thrombocytopenic purpura, DIC, haemophilia: classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching (2 class hours)

(**COMPREHEND:** compare pathophysiology and clinical manifestations of hematologic system disorder. **UNDERSTAND:** memorize clinical manifestations of hematologic system disorder. **MASTER:** apply knowledge to analyze problems in hematologic system disorder, bone marrow transplantation & bone marrow puncture. Make correct nursing diagnosis and nursing intervention.)

6. Oncology care: (16 hours)

- 6.1 Oncology: introduction & hospice care, radiation therapy care & chemotherapy immunotargeting therapy: introduction, classification, pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours).
- 6.2 Lung cancer: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).
- 6.3 Cancer of the esophagus: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).
- 6.4 Gastric cancer, colorectal cancer: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).
- 6.5 Liver neoplasms & pancreatic cancer: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).

- 6.6 Breast cancer: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).
- 6.7 Bone Tumor, multiple myeloma: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).
- 6.8 Lymphoma, Brain Tumor: classification, mechanism, side effects and prevention, palliative care for clients with cancer. The nurse's role and function in oncology therapy. (2 class hours).

(COMPREHEND: compare classification, pathophysiology and clinical manifestations of different tumors. compare classification and method of radiation therapy and chemotherapy
UNDERSTAND: memorize clinical manifestations of different tumors. Describe side effect of radiation therapy and chemotherapy. **MASTER:** apply knowledge to analyze problems in tumor. Make correct nursing diagnosis and nursing intervention.)

7. Renal System (15 hours)

- 7.1 Introduction, assessment & diagnostic tests of renal system. (2 class hours)
- 7.2 Benign prostatic hypertrophy: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)
- 7.3 Urolithiasis, urinary tract infection,: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)
- 7.4 Acute & chronic glomerulonephritis: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)
- 7.5 Nephrotic syndrome: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)
- 7.6 Renal failure: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (2 class hours)
- 7.7 Kidney tumors, bladder tumors, prostate tumors: pathophysiology, etiology, risk factors, clinical manifestations, diagnostic investigations, nursing assessment, surgical and medical treatments, nursing diagnosis, nursing intervention, nursing aim and client teaching. (3 class hours)

(COMPREHEND: compare pathophysiology and clinical manifestations of renal system disorder. **UNDERSTAND:** memorize clinical manifestations of renal system

disorder. **MASTER:** the clinical manifestations and apply knowledge to analyze problems in renal system. Make correct nursing diagnosis and nursing intervention.)

Practice (4 hours)

1. Simulation I: Neurological function assessment and nursing care

| Practice Item | Students / Group | Mode of Practice | Practice Requirement |
|--|----------------------------------|--|--|
| Neurological function assessment: log roll, neck collar, GCS, transportation and immobilization. | 8-9 students per group/ 3 groups | Every group demonstrates after group discussion. | The students correctly demonstrate the skills. |

2. Hematologic & renal system nursing care

| Practice Item | Students / Group | Mode of Practice | Practice Requirement |
|--|----------------------------------|--|--|
| Blood testing and blood transfusion for hematologic diseases. Urinary test and urinary catheterization. | 8-9 students per group/ 3 groups | Every group demonstrates after group discussion. | The students correctly demonstrate the skills. |

(**MASTER:** students correctly demonstrate the skills, health assessment- state of consciousness through Glasgow Coma Scale (GCS), transportation and immobilization of patients, blood transfusion, and urinary test)

Teaching Methods

Lectures, videos, case studies, audio-visuales, class exercise, simulations at nursing lab.

Attendance

Attendance of the learning module is in accordance with the attendance stated in 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, moreover, an "F" will be given as the final grade to students who have less than the stated attendance for the enrolled subject.

Assessment

This assessment is graded according to the percentage, with 100 being the full score and 50 the passing score. It includes four aspects: Test (35%), Final exam (35%), Skill exam (20%) and class performance/assignment (10%). **Any student scoring less than 35% of the total mark in the final examination will be given an "F" grade for the module even if the overall grade is 50% or higher.**

| Item | Description | Percentage |
|------------------------------|---|-------------|
| 1. Test | This is a close-book exam. It covers contents (NO. 1~17) in this subject. | 35% |
| 2. Final exam | This is a close-book exam. It covers contents (NO.18~36) in this subject. | 35% |
| 3. Nursing Skill Examination | All learned nursing skills | 20% |
| 4. Assignment | Class performance/Assignment | 10% |
| | Total percentage: | 100% |

Teaching Materials

Reference Book(s)

Janice L. Hinkle, Kerry H. Cheever (2022). *Brunner & Suddarth's textbook of medical-surgical nursing* (15th ed.). Philadelphia: Wolters Kluwer.

Sandra M.N. (2018). *The Lippincott manual of nursing practice* (11th ed.). Philadelphia: Lippincott Williams & Wilkins.

Sharon L. (2017). *Medical-Surgical Nursing: Assessment and Management of Clinical Problems*, (10th ed.). St. Louis, Missouri: Elsevier

Urden, L. D., Stacy, K. M., & Lough, M. E. (2018). *Thelan's critical care nursing: diagnosis and management* (8th ed.). St. Louis: Elsevier.

王肖龍，胡煒國（2013）。心電圖讀圖進階教程。上海：上海科學技術出版社。

尤黎明 吳瑛（2017）。外科護理學（第6版）。北京：人民衛生。

李樂之 路潛（2017）。外科護理學（第6版）。北京：人民衛生。

黃靜微，曾詩雯，莊琬筌（譯）（2018）。NANDA International 護理診斷：定義與分類 2018~2020（第8版）。台灣：華杏。

Journal(s)

Chinese Nursing Research (護理研究) (Mainland China)

(<http://c.wanfangdata.com.cn/periodical-sxhlzz.aspx>)

International Journal of Nursing Studies

(http://www.elsevier.com/wps/find/homepage.cws_home)

Journal of Advanced Nursing

(<http://www.journalofadvancednursing.com/>)

Nurse Education Today

(<https://www.journals.elsevier.com/nurse-education-today>)

Nursing Research

(<http://www.nursing-research-editor.com/index.php>)

The Journal of Nursing Research (護理研究) (Taiwan)

(http://www.twna.org.tw/frontend/un10_open/welcome.asp#)

Website(s)

CINAHL Plus with Full Text

Elsevier Clinical Skills

Ovid

Science Direct

MEDLINE

中國期刊全文數據庫 (CAJ)

實證護理資料庫

澳門虛擬圖書館

Time Schedule of 2A

| N O. | Date | Time | Content | Teacher |
|------|-----------------|------------------|---|---------|
| 1 | 20220107 | 0900-1100 | Hematologic system: introduction, assessment & diagnostic tests | Hsu 1 |
| 2 | 20220107 | 1100-1300 | Anemia | Wang 1 |
| 3 | 20220107 | 1430-1630 | White blood cells disorders & leukemia | Hsu 2 |
| 4 | 20220209 | 1100-1300 | Thrombocytopenic purpura, DIC, hemophilia | Wang 2 |
| 5 | 20220210 | 0900-1100 | Oncology: introduction & hospice care, radiation therapy care & chemotherapy immune-targeting therapy | Hsu 3 |
| 6 | 20220210 | 1430-1630 | Lung cancer | Wang 3 |
| 7 | 20220211 | 0900-1100 | Breast cancer | Wang 4 |
| 8 | 20220211 | 1430-1630 | Bone Tumor, multiple myeloma | Hsu 4 |
| 9 | 20220308 | 0900-1100 | Lymphoma, Brain Tumor | Hsu 5 |
| 10 | 20220308 | 1100-1300 | Nasopharyngeal carcinoma, cancer of the esophagus | Wang 5 |
| 11 | 20220309 | 1100-1300 | Gastric cancer, colorectal cancer | Wang 6 |
| 12 | 20220310 | 0900-1100 | Liver neoplasms & pancreatic cancer | Wang 7 |
| 13 | 20220310 | 1430-1730 | Introduction, pathogenesis & infection control | Wang 8 |
| 14 | 20220314 | 1100-1300 | AIDS | Wang 9 |
| 15 | 20220315 | 0900-1100 | Sinusitis, otitis media, Meniere's syndrome | Wang 10 |
| 16 | 20220315 | 1100-1300 | Cataract, glaucoma, conjunctivitis | Hsu 6 |
| 17 | 20220316 | 0900-1100 | Neurologic system: assessment, diagnostic tests | Hsu 7 |
| 18 | 20220317 | 0900-1100 | Head injuries and increased intracranial pressure (IICP) | Hsu 8 |
| 19 | 20220318 | 0900-1100 | Cerebrovascular accident | Hsu 9 |
| 20 | 20220318 | 1100-1300 | Meningitis, seizure | Hsu 10 |
| 21 | 20220321 | 0900-1100 | Midterm (Topic 1-17) | Wang 11 |
| 22 | 20220323 | 0900-1100 | Parkinson's disease, Alzheimer's disease | Hsu 11 |
| 23 | 20220325 | 0900-1100 | Musculoskeletal system: introduction, assessment & diagnostic tests | Lang 1 |
| 24 | 20220325 | 1100-1300 | Simulation skill 1: neurologic System (Dai, Wang) | Hsu 12 |
| 25 | 20220328 | 1100-1300 | Limb fracture | Lang 2 |
| 26 | 20220329 | 0900-1100 | Suppurative osteomyelitis | Lang 3 |
| 27 | 20220330 | 0900-1100 | Prolapse of lumbar intervertebral disk | Lang 4 |
| 28 | 20220401 | 0900-1100 | Total hip replacement, cast care & traction | Lang 5 |
| 29 | 20220401 | 1100-1300 | Urinary system: assessment & diagnostic tests | Lang 6 |
| 30 | 20220406 | 0900-1100 | Benign prostatic hyperplasia | Lang 7 |
| 31 | 20220408 | 0900-1100 | Urolithiasis, urinary tract infection | Lang 8 |
| 32 | 20220408 | 1100-1300 | Acute & chronic glomerulonephritis | Lang 9 |
| 33 | 20220411 | 0900-1100 | Nephrotic syndrome | Lang 10 |
| 34 | 20220412 | 0900-1100 | Renal failure | Lang 11 |

| N O. | Date | Time | Content | Teacher |
|-------------------------------|-------------|------------------|--|----------------|
| 35 | 20220413 | 0900-1100 | Simulation skill 2: hematologic & renal system (Hsu, Dai) | Wang 12 |
| 36 | 20220420 | 0900-1200 | Kidney tumors, bladder tumors, prostate tumors (3H) | Lang 12 |
| 20220511- 20220512 | | 0900-1700 | Skill review and exam | |
| 37 | 20220504 | 1100-1300 | Final Exam | Wang 13 |

Time Schedule of 2B

| NO. | Date | Time | Content | Teacher |
|-----|----------|-----------|---|---------|
| 1 | 20220106 | 1100-1300 | Hematologic system: introduction, assessment & diagnostic tests | Hsu 1 |
| 2 | 20220106 | 1430-1630 | Anemia | Wang 1 |
| 3 | 20220107 | 1430-1630 | Thrombocytopenic purpura, DIC, hemophilia | Wang 2 |
| 4 | 20220110 | 0900-1100 | White blood cells disorders & leukemia | Hsu 2 |
| 5 | 20220111 | 1430-1630 | Oncology: introduction & hospice care, radiation therapy care & chemotherapy immune-targeting therapy | Hsu 3 |
| 6 | 20220112 | 1100-1300 | Cataract, glaucoma, conjunctivitis | Hsu 4 |
| 7 | 20220113 | 1100-1300 | Lung cancer | Wang 3 |
| 8 | 20220113 | 1430-1630 | Bone Tumor, multiple myeloma | Hsu 5 |
| 9 | 20220117 | 0900-1100 | Lymphoma, Brain Tumor | Hsu 6 |
| 10 | 20220118 | 1430-1630 | Breast cancer | Wang 4 |
| 11 | 20220119 | 1100-1300 | Nasopharyngeal carcinoma, cancer of the esophagus | Wang 5 |
| 12 | 20220120 | 0900-1100 | Gastric cancer, colorectal cancer | Wang 6 |
| 13 | 20220120 | 1100-1300 | Liver neoplasms & pancreatic cancer | Wang 7 |
| 14 | 20220124 | 1100-1300 | Neurologic system: assessment, diagnostic tests | Hsu 7 |
| 15 | 20220125 | 1430-1630 | Introduction, pathogenesis & infection control | Wang 8 |
| 16 | 20220126 | 1100-1300 | AIDS | Wang 9 |
| 17 | 20220126 | 1430-1630 | Sinusitis, otitis media, Meniere's syndrome | Wang 10 |
| 18 | 20220209 | 0900-1100 | Head injuries and increased intracranial pressure (IICP) | Hsu 8 |
| 19 | 20220210 | 1100-1300 | Cerebrovascular accident | Hsu 9 |
| 20 | 20220211 | 0900-1100 | Meningitis, seizure | Hsu 10 |
| 21 | 20220215 | 0900-1100 | Midterm (Topic 1-17) | Dai 1 |
| 22 | 20220216 | 1100-1300 | Musculoskeletal system: introduction, assessment & diagnostic tests | Lang 1 |
| 23 | 20220217 | 1100-1300 | Simulation skill 1: neurologic system (Dai, Wang) | Hsu 11 |
| 24 | 20220217 | 1430-1630 | Limb fracture | Lang 2 |
| 25 | 20220218 | 1100-1300 | Parkinson's disease, Alzheimer's disease | Hsu 12 |
| 26 | 20220218 | 1430-1630 | Suppurative osteomyelitis | Lang 3 |
| 27 | 20220222 | 1430-1630 | Prolapse of lumbar intervertebral disk | Lang 4 |
| 28 | 20220223 | 1100-1300 | Total hip replacement, cast care & traction | Lang 5 |
| 29 | 20220223 | 1430-1630 | Urinary system: assessment & diagnostic tests | Lang 6 |
| 30 | 20220224 | 1100-1300 | Benign prostatic hyperplasia | Lang 7 |
| 31 | 20220224 | 1430-1630 | Urolithiasis, urinary tract infection | Lang 8 |
| 32 | 20220228 | 0900-1100 | Acute & chronic glomerulonephritis | Lang 9 |
| 33 | 20220301 | 1430-1630 | Nephrotic syndrome | Lang 10 |
| 34 | 20220302 | 1100-1300 | Renal failure | Lang 11 |
| 35 | 20220303 | 0900-1100 | Simulation skill 2: hematologic & renal system (Hsu, Dai) | Wang 11 |

| NO. | Date | Time | Content | Teacher |
|-------------------------------|-----------------|------------------|---|----------------|
| 36 | 20220304 | 1430-1730 | Kidney tumors, bladder tumors, prostate tumors (3H) | Lang 12 |
| 20220511- 20220512 | | 0900-1700 | Skill review and exam | |
| 37 | 20220504 | 1100-1300 | Final Exam | Hsu 13 |