



**PEKING UNIVERSITY HEALTH SCIENCE CENTER**  
**-MACAO POLYTECHNIC UNIVERSITY NURSING ACADEMY (AE)**  
**BACHELOR OF SCIENCE IN NURSING**  
**LEARNING MODULE OUTLINE**

|                       |   |               |  |
|-----------------------|---|---------------|--|
| Academic Year         | 2024-2025   | Semester      | II   |
| Module Code           | NPHA1102  |               |  |
| Learning Module       | Pharmacology  |               |  |
| Pre-requisite(s)      | N/A   |               |  |
| Medium of Instruction | Chinese / English   |               |  |
| Credits               | 3   | Contact Hours | 45   |
| Instructor            | Kenny Kuok (subject teacher)<br>LI HUI 李慧 (Beijing)<br>ZHOU HONG 周虹 (Beijing)<br>CUI SU YIN 崔素穎 (Beijing) | Email         | <a href="mailto:cfkuok@mpu.edu.mo">cfkuok@mpu.edu.mo</a><br><a href="mailto:lihui@bjmu.edu.cn">lihui@bjmu.edu.cn</a><br><a href="mailto:zhouhong@bjmu.edu.cn">zhouhong@bjmu.edu.cn</a><br><a href="mailto:csy@bjmu.edu.cn">csy@bjmu.edu.cn</a> |
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**MODULE DESCRIPTION 學科單元/科目概述**

This 45-hours subject covers basic concepts of pharmacology. It introduces the common used drugs with their pharmacological mechanisms, actions and side-effects, indications and contraindications systematically. Students could apply such knowledge to safe and effective administration of medications to clients.

**MODULE INTENDED LEARNING OUTCOMES (ILOS) 學科單元/科目預期學習成效**

On completion of this learning module, students will be able to:

|     |   |
|-----|---|
| M1. | Understand the basic concepts and regularities of pharmacology;                           |
| M2. | Explain the principles of drug actions;   |
| M3. | Describe the drug classification and their action mechanisms;                             |
| M4. | Evaluate the reasonable of clinical drug usage and familiar with the severe side effects. |



These ILOs aims to enable students to attain the following Programme Intended Learning Outcomes (PILOs):

The PILOs are aligned with the Dublin descriptors, including knowledge and understanding, acquisition, application, critical judgment, communication skills, and learning skills/ability.

| PILOs 課程預期學習成效  | M1 | M2 | M3 | M4 |
|---|----|----|----|----|
| P1. Demonstrate an understanding of the holistic nature of the clients' health status involving individual, family, and community aspects.  | ✓  | ✓  | ✓  | ✓  |
| P2. Demonstrate effective communication skills and the ability to establish and maintain a therapeutic relationship with clients.   | ✓  | ✓  | ✓  | ✓  |
| P3. Demonstrate acquisition, mastery, and application of knowledge and skills for nursing practice, including biological sciences, social sciences and humanities, by making appropriate clinical reasoning and performing safe and therapeutic practice. | ✓  | ✓  | ✓  | ✓  |
| P4. Demonstrate the ability to maintain legal and ethical standards of nursing practice.  | ✓  | ✓  | ✓  | ✓  |
| P5. Demonstrate the ability to carry out relevant research and contribute to the community's health.  | ✓  | ✓  | ✓  |    |
| P6. Work effectively and efficiently alone or in teams.   | ✓  | ✓  | ✓  | ✓  |
| P7. Demonstrate the ability to identify and evaluate health care issues.  | ✓  | ✓  | ✓  | ✓  |
| P8. Demonstrate a critical judgment and apply the principles of evidence-based practice to deliver nursing care.  |    | ✓  | ✓  | ✓  |

**MODULE SCHEDULE, COVERAGE AND STUDY LOAD 教與學日程、內容及學習量**

| Week 週                     | Content Coverage 涵蓋內容                        | Contact Hours 授課學時 |
|----------------------------|--|--------------------|
| A: 4<br>B: 4<br>C: 1       | Introduction to pharmacology                 | 2                  |
| A: 4<br>B: 4<br>C: 2       | Pharmacokinetics and pharmacodynamics        | 2                  |
| A: 5<br>B: 5<br>C: 3       | General and local anesthetics                | 2                  |
| A: 5-6<br>B: 5-6<br>C: 3-4 | Drugs affecting the central nervous system   | 7                  |
| A: 8<br>B: 7<br>C: 11      | Drugs affecting the autonomic nervous system | 4                  |



|                          |   |         |
|--------------------------|---|---------|
| A: 8<br>B: 7<br>C: 11    | Drugs used to manage pain                                   | 2       |
| A: 8<br>B: 7<br>C: 11-12 | Drugs affecting the cardiovascular system                   | 6       |
| A: 9<br>B: 7<br>C: 12    | Drugs affecting the endocrine system and metabolic diseases | 6       |
| A: 9<br>B: 8<br>C: 12    | Chemotherapeutic drugs                                      | 10      |
| A: 9<br>B: 8<br>C: 12    | Active learning module                                      | 2       |
|                          | Examination   | 2       |
|                          | Total   | 45Hours |

## TEACHING AND LEARNING ACTIVITIES

In this learning module, students will work towards attaining the ILOs through the following teaching and learning activities: 修讀本學科單元/科目，學生將透過以下教與學活動取得預期學習成效

| Teaching and Learning Activities | M1 | M2 | M3 | M4 |
|----------------------------------|----|----|----|----|
| T1. Lectures                     | ✓  | ✓  | ✓  | ✓  |
| T2. Active learning module       | ✓  | ✓  | ✓  | ✓  |
| T3. Final examination            | ✓  | ✓  | ✓  | ✓  |

## ATTENDANCE

Attendance requirements are governed by the Academic Regulations Governing Bachelor's Degree Programmes of the Macao Polytechnic University. Students who do not meet the attendance requirements for the learning module shall be awarded an 'F' grade.

## ASSESSMENT

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

Any student from Faculty of Health Sciences and Sports (FCSD) 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.

In this learning module, students are required to complete the following assessment activities:



| Assessment Activities                 | Weighting (%) | ILOs to be Assessed (M1,M2,M3,M4,M5.....) |
|---------------------------------------|---------------|---|
| A1. Final examination                 | 60            | M1, M2, M3, M4                            |
| A2. Assignments (individual or group) | 40            | M2, M3, M4                                |

The assessment will be conducted following the University's Assessment Strategy (see [www.mpu.edu.mo/teaching\\_learning/en/assessment\\_strategy.php](http://www.mpu.edu.mo/teaching_learning/en/assessment_strategy.php)). Passing this learning module indicates that students will have attained the ILOs of this learning module and thus acquired its credits.

### MARKING SCHEME (評分準則)

| Assessment Activities                 | Assessment Criteria  | Mark Ranges    |                        |                   |                  |                                    |
|---------------------------------------|--|----------------|------------------------|-------------------|------------------|------------------------------------|
|                                       |  | 88-100<br>High | 73-87<br>Signification | 58-72<br>Moderate | 50-57<br>Basic   | <50<br>Fail                        |
| A1. Final Examination                 | Demonstrate the ability to identify and apply appropriate concepts, methods and techniques                                     | Excellent      | Good/<br>Very Good     | Satisfactory      | Marginal<br>Pass | Not reaching<br>marginal<br>levels |
| A2. Assignments (individual or group) | Demonstrate the ability to complete individual or group assignments, and answer questions on the topics covered in the module. | Excellent      | Good/<br>Very Good     | Satisfactory      | Marginal<br>Pass | Not reaching<br>marginal<br>levels |

### REQUIRED READINGS 書單

Karen Whalen. (2022). *Lippincott's illustrated reviews: pharmacology* (8<sup>th</sup> ed.). Wolters Kluwer.

### REFERENCES 參考文獻

Rang, H. P., Ritter, J. M., Flower, R. J., Henderson, G. (2015). *Rang & Dale's Pharmacology* (8<sup>th</sup> ed.). Churchill Livingstone.

Roach, S.S. (2004). *Introductory Clinical Pharmacology* (7<sup>th</sup> ed.). Lippincott Williams & Wilkins.



## **STUDENT FEEDBACK**

At the end of each semester, students are invited to provide feedback on the learning module and the teaching arrangement through questionnaires. Your feedback is valuable for instructors to enhance the module and its delivery for future students. The instructor and programme coordinators will consider all feedback and respond with actions formally in the annual programme review.

## **ACADEMIC INTEGRITY**

The Macao Polytechnic University requires students to have full commitment to academic integrity when engaging in research and academic activities. Violations of academic integrity, which include but are not limited to plagiarism, collusion, fabrication or falsification, repeated use of assignments and cheating in examinations, are considered as serious academic offenses and may lead to disciplinary actions. Students should read the relevant regulations and guidelines in the Student Handbook which is distributed upon the admission into the University, a copy of which can also be found at [www.mpu.edu.mo/student\\_handbook/](http://www.mpu.edu.mo/student_handbook/).



Time table 1 Year 1 class A

Kenny's sessions

| Session | Date       | Time        | Topics   |
|---------|------------|-------------|--|
| 1       | 2025/02/10 | 11:00-13:00 | Introduction to pharmacology   |
| 2       | 2025/02/13 | 11:00-13:00 | Introduction to pharmacokinetics and pharmacodynamics  |
| 3       | 2025/02/17 | 11:00-13:00 | General and local anesthetics  |
| 4       | 2025/02/20 | 11:00-13:00 | Drugs affecting the CNS:<br>- Drugs for Parkinson disease<br>- Drugs for Alzheimer's disease   |
| 5       | 2025/02/24 | 11:00-13:00 | Drugs affecting the CNS:<br>- Antidepressant drugs<br>- Anxiolytic drugs                       |
| 6       | 2025/02/27 | 09:00-12:00 | Drugs affecting the CNS:<br>- Antipsychotic drugs<br>- Antiepileptic drugs<br>- CNS stimulants |

BeiJin-LI HUI 北京-李慧老師部分

| Session | Date       | Time        | Topics  |
|---------|------------|-------------|---|
| 1       | 2025/03/12 | 9:00-11:00  | Drugs affecting the ANS:<br>- Adrenergic agonists and antagonists   |
| 2       | 2025/03/12 | 11:00-13:00 | Drugs affecting the ANS:<br>- Cholinergic agonists and antagonists<br>- Neuromuscular blocking drugs                      |
| 3       | 2025/03/13 | 9:00-11:00  | Drugs used to manage pain:<br>- Opioids & non-opioid analgesics<br>- Nonsteroidal anti-inflammatory drugs                 |
| 4       | 2025/03/13 | 11:00-13:00 | Drugs affecting the CVS:<br>- Antihypertensive drugs<br>- Diuretics   |
| 5       | 2025/03/14 | 9:00-11:00  | Drugs affecting the CVS:<br>- Drugs for heart failure and angina pectoris   |
| 6       | 2025/03/14 | 11:00-13:00 | Drugs affecting the CVS:<br>- Antiarrhythmic drugs, anticoagulants and thrombolytic drugs, antianemic drugs               |
| 7       | 2025/03/17 | 9:00-11:00  | Drugs affecting the metabolic diseases:<br>- Drugs for diabetes mellitus<br>- Antihyperlipidemic drugs                    |
| 8       | 2025/03/17 | 11:00-13:00 | Drugs affecting the endocrine systems:<br>- Cortex hormones and corticosteroids<br>- Sex hormones and replacement therapy |
| 9       | 2025/03/18 | 9:00-11:00  | Drugs affecting the endocrine systems:<br>- Drugs for thyroid dysfunction and osteoporosis                                |
| 10      | 2025/03/18 | 11:00-13:00 | Antibacterial drugs I   |



|    |            |             |  |
|----|------------|-------------|--|
| 11 | 2025/03/19 | 9:00-11:00  | Antibacterial drugs II   |
| 12 | 2025/03/19 | 11:00-13:00 | Antibacterial drugs III  |
| 13 | 2025/03/20 | 9:00-11:00  | - Antituberculosis drugs<br>- Antileprosy drugs<br>- Antifungal drugs<br>- Antiviral drugs<br>- Antimalarial and antiparasitic drugs |
| 14 | 2025/03/20 | 11:00-13:00 | Antineoplastic drugs   |
| 15 | 2025/03/21 | 9:00-11:00  | Reviews and student reports  |



Time table 2 Year 1 class B

Kenny's sessions

| Session | Date       | Time        | Topics   |
|---------|------------|-------------|--|
| 1       | 2025/02/10 | 9:00-11:00  | Introduction to pharmacology   |
| 2       | 2025/02/13 | 9:00-11:00  | Introduction to pharmacokinetics and pharmacodynamics  |
| 3       | 2025/02/17 | 9:00-11:00  | General and local anesthetics  |
| 4       | 2025/02/20 | 9:00-11:00  | Drugs affecting the CNS:<br>- Drugs for Parkinson disease<br>- Drugs for Alzheimer's disease   |
| 5       | 2025/02/24 | 9:00-11:00  | Drugs affecting the CNS:<br>- Antidepressant drugs<br>- Anxiolytic drugs                       |
| 6       | 2025/02/27 | 14:30-17:30 | Drugs affecting the CNS:<br>- Antipsychotic drugs<br>- Antiepileptic drugs<br>- CNS stimulants |

BeiJin-ZHOU HONG 北京-周虹老師部分

| Session | Date       | Time        | Topics  |
|---------|------------|-------------|---|
| 1       | 2025/03/03 | 9:00-11:00  | Drugs affecting the ANS:<br>- Adrenergic agonists and antagonists   |
| 2       | 2025/03/03 | 14:30-16:30 | Drugs affecting the ANS:<br>- Cholinergic agonists and antagonists<br>- Neuromuscular blocking drugs                      |
| 3       | 2025/03/04 | 11:00-13:00 | Drugs used to manage pain:<br>- Opioids & non-opioid analgesics<br>- Nonsteroidal anti-inflammatory drugs                 |
| 4       | 2025/03/04 | 14:30-16:30 | Drugs affecting the CVS:<br>- Antihypertensive drugs<br>- Diuretics   |
| 5       | 2025/03/05 | 11:00-13:00 | Drugs affecting the CVS:<br>- Drugs for heart failure and angina pectoris   |
| 6       | 2025/03/05 | 14:30-16:30 | Drugs affecting the CVS:<br>- Antiarrhythmic drugs, anticoagulants and thrombolytic drugs, antianemic drugs               |
| 7       | 2025/03/06 | 11:00-13:00 | Drugs affecting the metabolic diseases:<br>- Drugs for diabetes mellitus<br>- Antihyperlipidemic drugs                    |
| 8       | 2025/03/06 | 14:30-16:30 | Drugs affecting the endocrine systems:<br>- Cortex hormones and corticosteroids<br>- Sex hormones and replacement therapy |
| 9       | 2025/03/07 | 14:30-16:30 | Drugs affecting the endocrine systems:<br>- Drugs for thyroid dysfunction and osteoporosis                                |
| 10      | 2025/03/10 | 9:00-11:00  | Antibacterial drugs I   |



|    |            |             |  |
|----|------------|-------------|--|
| 11 | 2025/03/10 | 14:30-16:30 | Antibacterial drugs II   |
| 12 | 2025/03/11 | 11:00-13:00 | Antibacterial drugs III  |
| 13 | 2025/03/11 | 14:30-16:30 | - Antituberculosis drugs<br>- Antileprosy drugs<br>- Antifungal drugs<br>- Antiviral drugs<br>- Antimalarial and antiparasitic drugs |
| 14 | 2025/03/12 | 9:00-11:00  | Antineoplastic drugs   |
| 15 | 2025/03/12 | 14:30-16:30 | Reviews and student reports  |



Time table 3 Year 1 class C

Kenny's sessions

| Session | Date       | Time        | Topics   |
|---------|------------|-------------|--|
| 1       | 2025/01/09 | 14:30-16:30 | Introduction to pharmacology   |
| 2       | 2025/01/16 | 14:30-16:30 | Introduction to pharmacokinetics and pharmacodynamics  |
| 3       | 2025/01/20 | 14:30-16:30 | General and local anesthetics  |
| 4       | 2025/01/23 | 14:30-16:30 | Drugs affecting the CNS:<br>- Drugs for Parkinson disease<br>- Drugs for Alzheimer's disease   |
| 5       | 2025/02/10 | 14:30-16:30 | Drugs affecting the CNS:<br>- Antidepressant drugs<br>- Anxiolytic drugs                       |
| 6       | 2025/02/13 | 14:30-17:30 | Drugs affecting the CNS:<br>- Antipsychotic drugs<br>- Antiepileptic drugs<br>- CNS stimulants |

BeiJin-CUI SU YIN 北京-崔素穎老師部分

| Session | Date       | Time        | Topics  |
|---------|------------|-------------|---|
| 1       | 2025/04/01 | 14:30-16:30 | Drugs affecting the ANS:<br>- Adrenergic agonists and antagonists   |
| 2       | 2025/04/02 | 11:00-13:00 | Drugs affecting the ANS:<br>- Cholinergic agonists and antagonists<br>- Neuromuscular blocking drugs                      |
| 3       | 2025/04/02 | 14:30-16:30 | Drugs used to manage pain:<br>- Opioids & non-opioid analgesics<br>- Nonsteroidal anti-inflammatory drugs                 |
| 4       | 2025/04/03 | 11:00-13:00 | Drugs affecting the CVS:<br>- Antihypertensive drugs<br>- Diuretics   |
| 5       | 2025/04/03 | 14:30-16:30 | Drugs affecting the CVS:<br>- Drugs for heart failure and angina pectoris   |
| 6       | 2025/04/07 | 9:00-11:00  | Drugs affecting the CVS:<br>- Antiarrhythmic drugs, anticoagulants and thrombolytic drugs, antianemic drugs               |
| 7       | 2025/04/07 | 11:00-13:00 | Drugs affecting the metabolic diseases:<br>- Drugs for diabetes mellitus<br>- Antihyperlipidemic drugs                    |
| 8       | 2025/04/08 | 11:00-13:00 | Drugs affecting the endocrine systems:<br>- Cortex hormones and corticosteroids<br>- Sex hormones and replacement therapy |
| 9       | 2025/04/08 | 14:30-16:30 | Drugs affecting the endocrine systems:<br>- Drugs for thyroid dysfunction and osteoporosis                                |
| 10      | 2025/04/09 | 11:00-13:00 | Antibacterial drugs I   |



|    |            |             |  |
|----|------------|-------------|--|
| 11 | 2025/04/09 | 14:30-16:30 | Antibacterial drugs II   |
| 12 | 2025/04/10 | 11:00-13:00 | Antibacterial drugs III  |
| 13 | 2025/04/10 | 14:30-16:30 | - Antituberculosis drugs<br>- Antileprosy drugs<br>- Antifungal drugs<br>- Antiviral drugs<br>- Antimalarial and antiparasitic drugs |
| 14 | 2025/04/11 | 11:00-13:00 | Antineoplastic drugs   |
| 15 | 2025/04/11 | 14:30-16:30 | Reviews and student reports  |