

# Macao Polytechnic Institute

## Peking University Health Science Center - Macao Polytechnic

### Institute Nursing Academy

### Bachelor of Science in Nursing

#### Module Outline

Academic Year 2021 / 2022 Semester 2

<b>Learning Module</b>	Pharmacology		<b>Class Code</b>	NPHA1102	
<b>Pre-requisite(s)</b>	Nil				
<b>Medium of Instruction</b>	English / Cantonese		<b>Credit</b>	3	
<b>Lecture Hours</b>	45 hrs	<b>Lab/Practice Hours</b>	0	<b>Total Hours</b>	45 hrs
<b>Instructor(s)</b>	Kenny Kuok Chiu Fai Zhou Hong 周虹 Li Hui 李慧 Cui Suying 崔素穎		<b>E-mail</b>	<a href="mailto:cfkuok@ipm.edu.mo">cfkuok@ipm.edu.mo</a>	
<b>Office</b>	Rm M708, Meng Tak Building, Main Campus		<b>Telephone</b>	85993437	

#### Description

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

#### Learning Outcomes

After completing the learning module, students will be able to:

1. Explain the basic concepts and regularities of pharmacology;
2. Explain the principles of drug actions;
3. Describe the drug classification and simple mechanisms;
4. Evaluate the reasonable of clinical drug usage and familiar with the severe side effects.

## **Content**

1. Introduction to pharmacology (5 hours)
  - 1.1 *Basic concepts of drug actions*
  - 1.2 *Potential targets for drug actions*
  - 1.3 *Introduction to pharmacokinetics and pharmacodynamics*
  
2. Drugs affecting the central nervous system (6 hours)
  - 2.1 *Drugs for Parkinson disease*
  - 2.2 *Drugs for seizure disorders*
  - 2.3 *Anxiolytic drugs*
  - 2.4 *Antidepressant drugs*
  - 2.5 *Antipsychotic drugs*
  - 2.6 *Alzheimer disease*
  - 2.7 *CNS stimulants*
  
3. General and local anesthetics (2 hours)
  
4. Drugs affecting the autonomic nervous system (4 hours)
  - 4.1 *Adrenergic agonists and antagonists*
  - 4.2 *Cholinergic agonists and antagonists*
  - 4.3 *Neuromuscular blocking drugs*
  
5. Drugs used to manage pain (2 hours)
  - 5.1 *Opioids*
  - 5.2 *Non-steroidal anti-inflammatory drugs*
  
6. Drugs affecting the cardiovascular system (6 hours)
  - 6.1 *Antihypertensive drugs and diuretics*
  - 6.2 *Drugs for heart failure*
  - 6.3 *Drugs for angina pectoris*
  - 6.4 *Antiarrhythmic drugs*
  - 6.5 *Anticoagulants, thrombolytic drugs and antianemic drugs*
  
7. Drugs affecting the endocrine system, metabolic diseases and anti-inflammatory drugs (6 hours)
  - 7.1 *Antihyperlipidemic drugs*
  - 7.2 *Drugs for diabetes mellitus*
  - 7.3 *Cortex hormones and corticosteroids*
  - 7.4 *Sex hormones and replacement therapy*

7.5 *Drugs for thyroid dysfunction*

7.6 *Drugs for osteoporosis*

8. Chemotherapeutic drugs (10 hours)

8.1 *Antibacterial drugs*

8.2 *Antituberculosis and antileprosy drugs*

8.3 *Antifungal drugs*

8.4 *Antiviral drugs*

8.5 *Antimalarial and antiparasitic drugs*

8.6 *Antineoplastic drugs*

9. Active learning module (2 hours)

10. Examination (2 hours)

### **Teaching Method**

Lectures, discussion, videos, case studies

### **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 subject.

### **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 students 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.*

	<b>Item</b>	<b>Description</b>	<b>Percentage</b>
1.	Active learning module	Will be announced in class	40%
2.	Final examination	All material in this semester	60%
<b>Total Percentage:</b>			<b>100%</b>

## **Teaching Material(s)**

### **Textbook(s)**

Karen Whalen. (2018). *Lippincott's illustrated reviews: pharmacology* (7<sup>th</sup> ed). Lippincott Williams & Wilkins.

## **Reference**

### **Reference book(s)**

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

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