



SUBJECT OUTLINE

Subject Name:

Subject Code:

Introduction to Pathophysiology and Pharmacology

BIOX212

SECTION 1 – GENERAL INFORMATION

Award/s:	Total Course Credit Points:	Level:
Diploma of Health Science (Chinese Remedial Massage)	16	2 nd Year
Duration:	1 Semester	
Subject is:	Subject Credit Points:	2
Core		

Student Workload:

No. timetabled hours per week:	No. personal study hours per week:	Total hours per week:
3	2	5

Delivery Mode*:

☐ On campus ☒ Online / Digital ☐ Blended ☐ Intensive

Weekly Session^ Format/s - 1 session per week:

<input checked="" type="checkbox"/> eLearning modules:	Lectures: Interactive online learning modules
	Tutorials: can include asynchronous tutor moderated discussion forum and activities, learning journal activities or other web-based resources

*All modes are supported by the online learning management system which will include subject documents such as handouts, readings and assessment guides.

^A 'session' is made up of 3 hours of timetabled / online study time per week unless otherwise specified. Each subject has a set number of sessions as outlined above.

Study Pattern: ☒ Full Time ☒ Part Time

Pre-requisites: BIOA122

Co-requisites: Nil

SECTION 2 – ACADEMIC DETAILS

Subject Rationale

This subject will deliver introductory concepts relating to pathophysiology and pharmacology. The subject will introduce some of the medical terminology used to describe pathological states together with common symptomology and investigations used in conventional medicine. It will then cover infectious diseases, abnormal immune responses and common diseases affecting the cardiovascular, respiratory, renal, gastrointestinal,



musculoskeletal, neurological, endocrine and reproductive systems. The content relating to these diseases will cover aspects of aetiology, pathophysiology, signs and symptoms and pharmacological management. These diseases will be covered with respect to the major red flag symptoms that patients may present. The subject will cover introductory aspects of pharmacology relating to pharmacodynamics, pharmacokinetics, routes of administration and the major drug classes used in the treatment of the disease states covered in the course.

Learning Outcomes

1. Identify pathophysiological processes involved in cellular responses, pain, and diseases of the musculoskeletal system.
2. Identify principles underpinning pharmacology, pharmacodynamics, pharmacokinetics, routes of administration and major drug classes.
3. Discuss the aetiologies, pathophysiology, signs and symptoms including red flag symptoms and pharmacological management of various diseases.

Assessment Tasks

Type	Learning Outcomes Assessed	Session Content Delivered	Due	Weighting
Online Quiz multiple choice (50 minutes)	1-2	1-4	Week 5	25%
Written Assignment 1 (750 words)	3	5-9	Week 11	35%
Written Assignment 2 (1000 words)	3	10-13	Week 15	40%

All written assessments and online quizzes are due at 11:55 p.m. and submitted through the LMS

Pass Requirements

To achieve a passing grade in this subject, students must:

- have a cumulative mark of at least 50%, and
- have submitted all assessment items with a value greater than 15%.

Prescribed Readings:

Best, J. (2022). *Pathophysiology, physical assessment, and pharmacology: Advanced integrative clinical concepts*. F. A. Davis. [ebook available]



Recommended Readings:

Bryant, B., & Knights, K. (2022). *Pharmacology for health professionals* (6th ed.). Elsevier. [ebook available].

Norris, T. L. (2019). *Porth's pathophysiology: Concepts of altered health states* (10th ed.). Wolters Kluwer

Tortora, G., Derrickson, B., Burkett, B., Cooke, J., DiPietro, F., Diversi, T., Dye, D., Engel, A., Green, H., Macartney, M., McKean, M., Peoples, G., & Summers, S. (2022). *Principles of anatomy and physiology* (3rd Asia-Pacific ed.). Wiley. [ebook available].

Subject Content		
Week	Lecture	Tutorial
1.	<p>Session 1</p> <p>Introduction to Pathophysiology & Symptomology</p> <ul style="list-style-type: none"> ➤ Medical terminology (ICD) ➤ Symptomology ➤ Pain, nausea, cough, breathless, constipation, diarrhoea, weight changes, fatigue, fever, rash 	Interactive tutorial activities on symptomology & medical terminologies
2.	<p>Session 2</p> <p>Pharmacology</p> <ul style="list-style-type: none"> ➤ Drug regulation and control ➤ Routes of administration ➤ Pharmacodynamics & pharmacokinetics ➤ Drug interactions & contraindications ⌚ Major drug classes 	Interactive tutorial activities on pharmacodynamics, pharmacokinetics, drug interactions and contraindications
3.	<p>Session 3</p> <p>Cellular Responses / Inflammation</p> <ul style="list-style-type: none"> ➤ Abnormal immune responses <ul style="list-style-type: none"> ⌚ Hypersensitivity ⌚ Autoimmunity ➤ Immunodeficiency 	Interactive tutorial activities on abnormal immune response
4.	<p>Session 4</p> <p>Pain & Headache</p> <p>Musculoskeletal System (MSK)</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Acute MSK conditions 	<p>Interactive tutorial activities on types of pain, pain pathways, and types of headaches</p> <p>Case studies on arthritis, gout and other MSK conditions</p>



	<ul style="list-style-type: none"> ⦿ Bone & soft tissue ➤ Inflammatory joint diseases <ul style="list-style-type: none"> ⦿ Osteoarthritis & rheumatoid arthritis ⦿ Gout ➤ Osteoporosis ➤ Neuromuscular disorders 	
5.	<p>Session 5</p> <p>Infections</p> <ul style="list-style-type: none"> ➤ Bacterial ➤ Viral & fungal 	Interactive tutorial activities on pathophysiology and pharmacology of infectious diseases
6.	<p>Session 6</p> <p>Gastrointestinal Disease</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Gastro-oesophageal reflux disease (GORD) ➤ Peptic ulcer disease (PUD) ➤ Inflammatory diseases of gut (Irritable bowel syndrome (IBS), Crohn's, Ulcerative colitis (UC)) ➤ Food intolerance ➤ Pancreatic disease ➤ Hepatic disease ➤ Cholecystitis and gallstones 	Case studies on gastrointestinal diseases
7.	<p>Session 7</p> <p>Respiratory Disease</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Asthma ➤ Chronic obstructive pulmonary disease (COPD) ➤ Pneumonia ➤ Tuberculosis ➤ Restrictive airway diseases 	Case studies on respiratory diseases
	<p>NON-TEACHING WEEK (note that make-up classes may be scheduled in this week)</p> <p>Online students – The non-teaching week falls between Weeks 7 and 8</p>	
8.	Session 8	Case studies on cardiovascular diseases



	<p>Cardiovascular Disease</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Disorders of rate, rhythm, conduction ➤ Atherosclerosis ➤ Hypertension ➤ Angina ➤ Myocardial infarction ➤ Vascular disease 	
9.	<p>Session 9</p> <p>Renal Disease</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Urinary tract infection (UTI) ➤ Cystitis ➤ Kidney stones ➤ Renal failure / Chronic kidney disease (CKD) 	Case studies on renal diseases
10.	<p>Session 10</p> <p>Endocrine Disease</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Thyroid diseases ➤ Hypothalamic & pituitary disease ➤ Adrenal disease ➤ Type I, II, III Diabetes ➤ Metabolic syndrome 	Case studies on endocrine diseases
11.	<p>Session 11</p> <p>Male & Female Reproductive Disorders</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Benign prostatic hyperplasia ➤ Hypogonadism ➤ Menstrual disorders ➤ Endometriosis ➤ Pelvic inflammatory disease 	Case studies on male and female reproductive disorders



	<ul style="list-style-type: none"> ➤ Polycystic ovarian syndrome (PCOS) ➤ Sexually transmitted infections 	
12.	<p>Session 12</p> <p>Neurological Disease</p> <p>Aetiology, pathophysiology, signs and symptoms and pharmacological management of:</p> <ul style="list-style-type: none"> ➤ Transient ischaemic attack ➤ Depression & anxiety 	Case studies on neurological diseases
13.	<p>Session 13</p> <ul style="list-style-type: none"> ➤ Revision 	Interactive tutorial activities for revision purposes
14.	<p>Non-Teaching Week/Practical Examination Week 1</p> <p>Note that make-up classes may be scheduled in this week</p>	
15.	<p>Non-Teaching Week/Practical Examination Week 2</p> <p>Note that make-up classes may be scheduled in this week</p>	
16.	<p>Final Examination Week 1</p> <p>There is no final exam for this subject</p>	
17.	<p>Final Examination Week 2</p> <p>There is no final exam for this subject</p>	