



SUBJECT OUTLINE

Subject Name:

Pathology and Clinical Sciences 2 and 3

Subject Code:

BIOS222

SECTION 1 – GENERAL INFORMATION

Award/s:	Total Course Credit Points:	Level:
Bachelor of Health Science (Acupuncture)	128	2 nd Year
Bachelor of Health Science (Naturopathy)	128	2 nd Year
Bachelor of Health Science (Nutritional and Dietetic Medicine)	96	2 nd Year
Bachelor of Health Science (Myotherapy)	96	2 nd Year

Duration: 1 Semester

Subject Coordinator: Dr Manisha Thakkar (Adelaide campus) and Jenny Yeeles (Adelaide campus)

Subject is: Core **Subject Credit Points:** 4

Student Workload:

No. timetabled hours per week:	No. personal study hours per week:	Total hours per week:
6	4	10

Delivery Mode:

Face to Face (On Campus)	2 x 2 hour lectures	2 x 1 hour tutorials
e-Learning (Online)	Narrated PowerPoint presentations Tutorials: Asynchronous tutor moderated discussion forum and activities Student handouts, web-based resources	
Blended Learning (Online and On Campus)	2 x 2 hour lectures on campus / 2 x 1 hour online activities / discussions synchronous live streaming Content delivery plus revision through web-based resources including interactive videos / activities / through lecture / interactive tutorial readings activities / workshop / discussion	
Intensive Delivery (Summer School)	Contact hours are delivered over 5 weeks with 3 x 5.25 hour days delivered per week Content: Combination lecture and tutorial activities Assessment: Summary Table 1 - Week 1; Summary Table 2 - Week 2; Case Review - Week 4; Summary Table 3 - Week 5; Case Study Assignment - Week 6 Full Time Part Time	
Pre-requisites:	BIOC211	
Co-requisites:	Nil	



SECTION 2 – ACADEMIC DETAILS

Subject Rationale

This advanced pathology subject expands on the knowledge gained in Pathology and Clinical Science 1 (BIOC211), and considers disorders related to sensory organs such as eyes, ears, nose, and throat, and other systems of the human body including the blood, skin, musculoskeletal, endocrine, nervous and reproductive systems. This subject further considers disorders that affect more than one body system, giving students an opportunity to look at multisystem disorders and their management. Upon successful completion of this subject, students should be able to apply the knowledge of basic pathological processes to analyse and critically evaluate clinical features and investigation tests and to understand the basis for differential diagnosis of the relevant disorders covered in this subject.

Learning Outcomes

1. Describe the pathological processes and analyse how they contribute to the development of signs and symptoms of various diseases.
2. Identify the role of clinical features in the process of clinical management.
3. Identify appropriate diagnostic investigations and recognise abnormal results that aid in clinical management of various diseases.
4. Apply clinical analysis skills in the formulation of the clinical management plan for various diseases.

Assessment Tasks

Type	Learning Outcomes Assessed	Session Content Delivered	Due	Weighting
Summary Table 1	1-3	1-6	Week 5	10%
Summary Table 2	1-3	7-14	Week 8	10%
Case Review (1500 words)	1-4	11-17	Week 11	30%
Summary Table 3	1-3	15-22	Week 12	10%
Case Study Assignment (2000 words)	1-4	18-26	Week 15	40%

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



Prescribed Readings:

1. Norris, T. L. (2019). *Porth's pathophysiology: Concepts of altered health states* (10th ed.). Wolters Kluwer.
2. Ralston, S. H., Penman, I. D., Strachan, M. W. J., & Hobson, R. P. (Eds.). (2018). *Davidson's principles and practice of medicine* (23rd ed.). Elsevier. [ebook available]

Recommended Readings:

1. Jamison, J. R. (2006). *Differential diagnosis for primary care: A handbook for health care practitioners* (2nd ed.). Churchill Livingstone.
2. Jarvis, C. (2019). *Physical examination & health assessment* (8th ed.). Elsevier.
3. Lee, G., & Bishop, P. (2016). *Microbiology and infection control for health professionals* (6th ed.). Pearson Australia.
4. Reisner, E.G., & Reisner, H. M. (2016). *Crowley's an introduction to human disease: Pathology and pathophysiology correlations* (10th ed.). Jones & Bartlett.
5. Tortora, G. J., Derrickson, B., Burkett, B., Peoples, G., Dye, D., Cooke, J., Diversi, T., McKean, M., Samalia, L., & Mellifont, R. (2019). *Principles of anatomy and physiology* (2nd Asia-Pacific ed.). Wiley. [ebook available]
6. VanMeter, K. C., & Hubert, R. J. (2014). *Gould's pathophysiology for the health professions* (5th ed.). Saunders. [ebook available]

Subject Content

Week	Lectures	Tutorials / Practicals
1.	<p>Session 1</p> <p>Introduction (Subject Outline / Subject Aims / Assessment / Teaching Resources)</p> <p>Disorders of the Ear, Nose and Throat</p> <ul style="list-style-type: none"> ➤ Overview of the human ear ➤ Presenting problems in ear disorders ➤ Disorders of the ear ➤ Overview of the nose and throat ➤ Presenting problems in nose and throat disorders ➤ Disorders of the nose and throat 	<p>Activities are developed to allow the students to explore relevant concepts, expand on ideas and have peer and lecturer interaction. Activities also allow for formative assessment and feedback</p> <p>Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to ear, nose and throat</p> <p>Post lecture: Interactive tutorial activities on the diseases related to ear, nose and throat</p>
	<p>Session 2</p> <p>Ocular Disorders</p> <ul style="list-style-type: none"> ➤ Overview of the human eye ➤ Disorders of the eye <ul style="list-style-type: none"> ⊙ The red eye disorders ⊙ Lumps and bumps 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to eyes and visual disturbances</p> <p>Post lecture: Interactive tutorial activities on the diseases related to eyes and visual disturbances</p>



	<ul style="list-style-type: none"> ⊗ Cataracts ⊗ Glaucoma ⊗ Age related macular degeneration ⊗ Retinal detachment 	
2.	<p>Session 3</p> <p>Lymphatic and Haematological Disorders 1</p> <ul style="list-style-type: none"> ⊗ Overview of the lymphatic and haematological system ⊗ Presenting problems in haematological diseases ⊗ Examination and investigation of the haematological system 	<p>Pre-lecture: Interactive contents/web-based resources/videos, readings on the principles of haematology</p> <p>Post lecture: Interactive tutorial activities on the principles of haematology</p>
	<p>Session 4</p> <p>Lymphatic and Haematological Disorders 2</p> <ul style="list-style-type: none"> ⊗ The anaemias <ul style="list-style-type: none"> ⊗ Iron deficiency anaemia ⊗ Megaloblastic anaemia ⊗ Anaemia of chronic disease ⊗ Haemolytic anaemia ⊗ Sickle cell anaemia ⊗ Thalassemia 	<p>Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to anaemia</p> <p>Post lecture: Interactive tutorial activities on the diseases related to anaemia</p>
3.	<p>Session 5</p> <p>Lymphatic and Haematological Disorders 3</p> <ul style="list-style-type: none"> ⊗ Aplastic anaemia ⊗ Haematological malignancies: <ul style="list-style-type: none"> ⊗ Leukaemias ⊗ Lymphomas ⊗ Multiple myeloma 	<p>Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to haematological cancers</p> <p>Post lecture: Interactive tutorial activities on the diseases related to haematological cancers</p>
	<p>Session 6</p> <p>Lymphatic and Haematological Disorders 4</p> <ul style="list-style-type: none"> ⊗ Myeloproliferative disorders ⊗ Bleeding disorders ⊗ Thrombotic disorders 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to myeloproliferative disorders and bleeding disorders</p> <p>Post lecture: Interactive tutorial activities on the diseases related to myeloproliferative disorders and bleeding disorders</p>
4.	<p>Session 7</p> <p>Integumentary System Disorders 1</p> <ul style="list-style-type: none"> ⊗ Overview of the integumentary system ⊗ Presenting problems in integumentary diseases ⊗ Examination and investigation of the integumentary system 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the principles related to integumentary system</p> <p>Post lecture: Interactive tutorial activities on the principles related to integumentary system</p>



	<p>Session 8</p> <p>Integumentary System Disorders 2</p> <ul style="list-style-type: none"> ➤ Eczema ➤ Psoriasis ➤ Lichen planus ➤ Skin infections and infestations 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the principles related to integumentary system</p> <p>Post lecture: Interactive tutorial activities on the principles related to integumentary system</p>
5.	<p>Session 9</p> <p>Integumentary System Disorders 3</p> <ul style="list-style-type: none"> ➤ Acne and Rosacea ➤ Acne vulgaris ➤ Rosacea ➤ Pressure sores ➤ Skin tumours 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the principles related to integumentary system</p> <p>Post lecture: Interactive tutorial activities on the principles related to integumentary system</p>
	<p>Session 10</p> <p>Support for Case Review and Case Study Assignment</p>	
6.	<p>Session 11</p> <p>Musculoskeletal System Disorders 1</p> <ul style="list-style-type: none"> ➤ Overview of the musculoskeletal system ➤ Presenting problems in musculoskeletal diseases ➤ Examination and investigation of the musculoskeletal system ➤ Principles of management of musculoskeletal disorders 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to bones and joints</p> <p>Post lecture: Interactive tutorial activities on the diseases related to bones and joints</p>
	<p>Session 12</p> <p>Musculoskeletal System Disorders 2</p> <ul style="list-style-type: none"> ➤ Osteoarthritis ➤ Inflammatory joint diseases <ul style="list-style-type: none"> ⊖ Rheumatoid arthritis ⊖ Seronegative Spondylarthritis 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to bones and joints</p> <p>Post lecture: Interactive tutorial activities on the diseases related to bones and joints</p>
7.	<p>Session 13</p> <p>Musculoskeletal System Disorders 3</p> <ul style="list-style-type: none"> ➤ Gout ➤ Bone and joint Infection ➤ Diseases of bone <ul style="list-style-type: none"> ⊖ Osteoporosis ⊖ Osteomalacia and rickets ⊖ Paget's disease ⊖ Bone tumours ➤ Fibromyalgia 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to bones and joints</p> <p>Post lecture: Interactive tutorial activities on the diseases related to bones and joints</p>



	<p>Session 14</p> <p>Musculoskeletal System Disorders 4</p> <ul style="list-style-type: none"> ➤ Neuromuscular disorders <ul style="list-style-type: none"> ⊗ Gait disorders ⊗ Involuntary movement ⊗ Disorders of the spine and spinal cord ⊗ Diseases of nerve ⊗ Diseases of the neuromuscular junction 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the neuromuscular disorders</p> <p>Post lecture: Interactive tutorial activities on the neuromuscular disorders</p>
<p>NON-TEACHING WEEK (note that make-up classes may be scheduled in this week)</p> <p>Semester 1 – This aligns with the week after Easter so it may fall between Weeks 6 to 8</p> <p>Semester 2 & Online students – The non-teaching week falls between Weeks 7 and 8</p>		
8.	<p>Session 15</p> <p>Endocrine System Disorders 1</p> <ul style="list-style-type: none"> ➤ Overview of the endocrine system ➤ Presenting problems in endocrine diseases ➤ Investigations of endocrine diseases ➤ Overview of thyroid gland ➤ Thyroid diseases ➤ Overview of parathyroid gland ➤ Parathyroid diseases 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to endocrine system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to endocrine system</p>
	<p>Session 16</p> <p>Endocrine System Disorders 2</p> <ul style="list-style-type: none"> ➤ Overview of adrenal gland ➤ Adrenal disease ➤ Overview of hypothalamus and pituitary ➤ Hypothalamic and pituitary disease 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to endocrine system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to endocrine system</p>
9.	<p>Session 17</p> <p>Endocrine System Disorders 3</p> <ul style="list-style-type: none"> ➤ Overview of the Pancreas ➤ The endocrinal pancreatic disease: Diabetes Mellitus 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to endocrine system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to endocrine system</p>
	<p>Session 18</p> <p>Male Reproductive Disorders</p> <ul style="list-style-type: none"> ➤ Overview of the male reproductive system ➤ Presenting problems in male reproductive diseases ➤ Examination and investigation of the male reproductive systems ➤ Hypogonadism ➤ Gynaecomastia 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to male reproductive system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to male reproductive system</p>



	<ul style="list-style-type: none"> ➤ Klinefelter's syndrome ➤ Prostate disorders ➤ Penile and testicular disorders 	
10.	<p>Session 19</p> <p>Female Reproductive Disorders 1</p> <ul style="list-style-type: none"> ➤ Overview of the female reproductive system ➤ Presenting problems in female reproductive diseases ➤ Examination and investigation of the female reproductive systems ➤ Delayed puberty ➤ Turners syndrome ➤ Menstrual disorders ➤ Hirsutism ➤ Urogenital disorders 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to female reproductive system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to female reproductive system</p>
	<p>Session 20</p> <p>Female Reproductive Disorders 2</p> <ul style="list-style-type: none"> ➤ Uterine disorders ➤ Disorders of the fallopian tubes and ovaries ➤ Pelvic inflammatory disease ➤ Gynaecological cancers 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to female reproductive system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to female reproductive system</p>
11.	<p>Session 21</p> <p>Female Reproductive Disorders 3</p> <ul style="list-style-type: none"> ➤ Breast disorders ➤ Pregnancy related disorders 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to female reproductive system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to female reproductive system</p>
	<p>Session 22</p> <p>Infertility, sexually transmitted infections and paediatric disorders</p> <ul style="list-style-type: none"> ➤ Infertility ➤ Sexually transmitted infections ➤ Paediatric disorders 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on infertility, sexually transmitted diseases and paediatric disorders</p> <p>Post lecture: Interactive tutorial activities on infertility, sexually transmitted diseases and paediatric disorders</p>
12.	<p>Session 23</p> <p>Nervous System Disorders 1</p> <ul style="list-style-type: none"> ➤ Overview of the central nervous system ➤ Presenting problems in nervous system diseases ➤ Disorders of the cerebro spinal fluid ➤ Cerebrovascular diseases 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to nervous system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to nervous system</p>



	<p>Session 24</p> <p>Nervous System Disorders 2</p> <ul style="list-style-type: none"> ➤ Inflammatory diseases ➤ Degenerative diseases ➤ CNS infections ➤ CNS tumours 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to nervous system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to nervous system</p>
13.	<p>Session 25</p> <p>Nervous System Disorders 3</p> <ul style="list-style-type: none"> ➤ Psychological medicine ➤ Mood disorders ➤ Anxiety disorders ➤ Schizophrenia ➤ Eating disorders ➤ Drug abuse and misuse 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to nervous system</p> <p>Post lecture: Interactive tutorial activities on the diseases related to nervous system</p>
	<p>Session 26</p> <p>Multisystem Disorders</p> <ul style="list-style-type: none"> ➤ Hypertension ➤ Chronic fatigue syndrome ➤ SLE ➤ Cystic fibrosis ➤ Metabolic syndromes 	<p>Pre-lecture: Interactive contents / web-based resources/videos, readings on the multisystem diseases</p> <p>Post lecture: Interactive tutorial activities on the multisystem diseases</p>
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>	