



SUBJECT OUTLINE

Subject Name:

Pathology and Clinical Sciences 2 and 3

Subject Code:

BIOS222

SECTION 1 – GENERAL INFORMATION

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| Award/s: | Total Course Credit Points: | Level: |
| Bachelor of Health Science (Naturopathy) | 128 | 2 nd Year |
| Bachelor of Health Science (Nutritional and Dietetic Medicine) | 96 | 2 nd Year |
| Duration: 1 Semester | | |
| Subject is: Core | Subject Credit Points: 4 | |

Student Workload:

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| No. timetabled hours per week: 6 | No. personal study hours per week: 4 | Total hours per week: 10 |
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Delivery Mode*:

☐ On campus ☐ Online / Digital ☒ Blended ☐ Intensive

Weekly Session^ Format/s - 2 sessions per week:

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| <input checked="" type="checkbox"/> Livestream lectures: | <input checked="" type="checkbox"/> 2 hours <input type="checkbox"/> 3 hours | 2 x 2 hour lectures per week |
| <input checked="" type="checkbox"/> eLearning tutorials: | Tutorials: 2 x 1 hour interactive online learning modules that include learning journal activities, interactive clinical cases 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.

Note: As they are aware, international students on a Student Visa (500) must attend livestream classes on their local campus, using the Virtual Classrooms provided.

Study Pattern: ☒ Full Time ☒ Part Time

Pre-requisites: Nil

Co-requisites: BIOC211

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 pathophysiological processes to analyse and critically evaluate clinical features, diagnostic tests, management and to understand the basis for differential diagnosis of the relevant disorders covered in this subject.

Learning Outcomes

1. Describe the pathophysiological processes and analyse how they contribute to the development of signs and symptoms of various diseases.
2. Justify tests used in the diagnosis and management of various diseases.
3. Interpret laboratory and other diagnostic test results in the context of client's presenting complaints and incorporate results into the appropriate holistic case analysis.

Assessment Tasks

| Type | Learning Outcomes Assessed | Session Content Delivered | Due | Weighting |
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| Online quiz (50 minutes) | 1-3 | 1-9 | Week 7 | 30% |
| Written assignment (1500 words) | 1-3 | 11-17 | Week 11 | 35% |
| Case Study Assignment (1500 words) | 1-3 | 18-26 | Week 15 | 35% |

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

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

Penman, I. D., Ralston, S. H., Strachan, M. W. J., & Hobson, R. P. (Eds.). (2023). *Davidson's principles and practice of medicine* (24th ed.). Elsevier.



Recommended Readings:

- Jamison, J. R. (2006). *Differential diagnosis for primary care: A handbook for health care practitioners* (2nd ed.). Churchill Livingstone.
- Jarvis, C. (2019). *Physical examination & health assessment* (8th ed.). Elsevier.
- Lee, G., & Bishop, P. (2016). *Microbiology and infection control for health professionals* (6th ed.). Pearson Australia.
- Reisner, E.G., & Reisner, H. M. (2016). *Crowley's an introduction to human disease: Pathology and pathophysiology correlations* (10th ed.). Jones & Bartlett.
- Tortora, G. J., 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]
- 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 |
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| 1. | <p>Session 1</p> <p>Introduction (Subject Outline / Subject Aims / Assessment / Teaching Resources)</p> <p>Disorders of the Ear, Nose and Throat - pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Disorders of the ear ➤ 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>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to ear, nose and throat |
| | <p>Session 2</p> <p>Ocular Disorders – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Disorders of the eye <ul style="list-style-type: none"> ➤ The red eye disorders ➤ Lumps and bumps ➤ Cataracts ➤ Glaucoma ➤ Age related macular degeneration ➤ Retinal detachment | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to eyes and visual disturbances |
| 2. | <p>Session 3</p> <p>Lymphatic and Haematological Disorders 1 - pathophysiology / clinical manifestations /</p> | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the principles of haematology |



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| | investigations /management / differential diagnosis <ul style="list-style-type: none"> ➤ Clinical manifestations of haematological disorders ➤ Examination and investigation of the haematological system | |
| | Session 4 Lymphatic and Haematological Disorders 2 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <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 | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on anaemia |
| 3. | Session 5 Lymphatic and Haematological Disorders 3 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <ul style="list-style-type: none"> ➤ Aplastic anaemia ➤ Haematological malignancies: <ul style="list-style-type: none"> ➤ Leukaemias ➤ Lymphomas ➤ Multiple myeloma | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on haematological cancers |
| | Session 6 Lymphatic and Haematological Disorders 4 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <ul style="list-style-type: none"> ➤ Myeloproliferative disorders ➤ Bleeding disorders ➤ Thrombotic disorders | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to myeloproliferative disorders and bleeding disorders |
| 4. | Session 7 Integumentary System Disorders 1 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the principles related to integumentary system |



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| | <ul style="list-style-type: none"> ➤ Clinical manifestations of integumentary system disorders ➤ Examination and investigation of the integumentary system | |
| | <p>Session 8</p> <p>Integumentary System Disorders 2 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Eczema ➤ Psoriasis ➤ Lichen planus ➤ Skin infections and infestations | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the principles related to integumentary system |
| 5. | <p>Session 9</p> <p>Integumentary System Disorders 3 - pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Acne and Rosacea ➤ Acne vulgaris ➤ Rosacea ➤ Pressure sores ➤ Skin tumours | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the principles related to integumentary system |
| | <p>Session 10</p> <p>Assessment support</p> | |
| 6. | <p>Session 11</p> <p>Musculoskeletal System Disorders 1 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Clinical manifestations of musculoskeletal disorders ➤ Examination and investigation of the musculoskeletal system ➤ Principles of management of musculoskeletal disorders | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to bones and joints |
| | <p>Session 12</p> <p>Musculoskeletal System Disorders 2 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Osteoarthritis | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to bones and joints |



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| | <ul style="list-style-type: none"> ➤ Inflammatory joint diseases <ul style="list-style-type: none"> ➤ Rheumatoid arthritis ➤ Seronegative Spondylarthritis | |
| 7. | <p>Session 13</p> <p>Musculoskeletal System Disorders 3 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</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>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to bones and joints |
| | <p>Session 14</p> <p>Musculoskeletal System Disorders 4 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</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>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the neuromuscular disorders |
| <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 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Clinical manifestations of endocrine system disorders ➤ Thyroid gland disorders ➤ Parathyroid gland disorders | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to endocrine system |
| | <p>Session 16</p> | <p>Post lecture:</p> |



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| | Endocrine System Disorders 2 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <ul style="list-style-type: none"> ➤ Adrenal gland disorders ➤ Hypothalamic and pituitary gland disorders | <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to endocrine system |
| 9. | Session 17 Endocrine System Disorders 3 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <ul style="list-style-type: none"> ➤ Pancreas/Diabetes Mellitus | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on diabetes mellitus |
| | Session 18 Male Reproductive Disorders – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <ul style="list-style-type: none"> ➤ Clinical manifestations of male reproductive disorders ➤ Examination and investigation of the male reproductive systems ➤ Hypogonadism ➤ Gynaecomastia ➤ Prostate disorders ➤ Penile and testicular disorders | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to male reproductive system |
| 10. | Session 19 Female Reproductive Disorders 1 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis <ul style="list-style-type: none"> ➤ Clinical manifestations of female reproductive disorders ➤ Examination and investigation of the female reproductive systems ➤ Delayed puberty ➤ Menstrual disorders ➤ Urogenital disorders | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to female reproductive system |
| | Session 20 Female Reproductive Disorders 2 - pathophysiology / clinical manifestations / investigations / management / differential diagnosis | Post lecture: <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to female reproductive system |



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| | <ul style="list-style-type: none"> ➤ Uterine disorders ➤ Disorders of the fallopian tubes and ovaries ➤ Pelvic inflammatory disease ➤ Gynaecological cancers | |
| 11. | <p>Session 21</p> <p>Female Reproductive Disorders 3 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Breast disorders ➤ Pregnancy related disorders | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to female reproductive system |
| | <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>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on infertility, sexually transmitted diseases, and paediatric disorders |
| 12. | <p>Session 23</p> <p>Nervous System Disorders 1 - pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Clinical manifestations of nervous system disorders ➤ Disorders of the cerebrospinal fluid ➤ Cerebrovascular conditions | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to nervous system |
| | <p>Session 24</p> <p>Nervous System Disorders 2 – pathophysiology / clinical manifestations / investigations / management</p> <ul style="list-style-type: none"> ➤ Inflammatory diseases ➤ Degenerative disorders ➤ CNS infections ➤ CNS tumours | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to nervous system |
| 13. | <p>Session 25</p> <p>Nervous System Disorders 3 – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Psychological medicine ➤ Mood disorders | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the conditions related to nervous system |



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| | <ul style="list-style-type: none"> ➤ Anxiety disorders ➤ Schizophrenia ➤ Eating disorders ➤ Drug abuse and misuse | |
| | <p>Session 26</p> <p>Multisystem Disorders – pathophysiology / clinical manifestations / investigations / management / differential diagnosis</p> <ul style="list-style-type: none"> ➤ Hypertension ➤ Chronic fatigue syndrome ➤ SLE ➤ Cystic fibrosis ➤ Metabolic syndromes ➤ Turner's syndrome ➤ Klinefelter's syndrome | <p>Post lecture:</p> <ul style="list-style-type: none"> ➤ Interactive tutorial activities on the multisystem disorders |
| 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> | |