SECTION 1 – GENERAL INFORMATION

Award/s: Total Course Credit Points: Level:
Bachelor of Health Science (Acupuncture) 128 2nd Year
Bachelor of Health Science (Naturopathy) 128 2nd Year
Bachelor of Health Science (Nutritional and Dietetic Medicine) 96 2nd Year
Bachelor of Health Science (Myotherapy) 96 2nd Year
Bachelor of Complementary Medicine 48 2nd Year

Duration: 1 Semester

Subject Coordinator: Jenny Yeeles (Adelaide Campus)

Subject is: Core

Subject Credit Points: 4

Student Workload:

<table>
<thead>
<tr>
<th>Delivery Mode</th>
<th>No. timetabled hours per week: 6</th>
<th>No. personal study hours per week: 4</th>
<th>Total hours per week: 10</th>
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</thead>
<tbody>
<tr>
<td>Face to Face (On Campus)</td>
<td>2 x 2 hour lectures</td>
<td>2 x 1 hour tutorials</td>
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<tr>
<td>e-Learning (Online)</td>
<td>Narrated PowerPoint presentations</td>
<td>Tutorials: Asynchronous tutor moderated discussion forum and activities</td>
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<td></td>
<td>Student handouts, web-based resources, videos, readings, case studies</td>
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<tr>
<td>Blended Learning (Online and On Campus)</td>
<td>2 x 2 hour lectures / interactive activities / workshop / discussion</td>
<td>2 x 1 hour tutorial / workshop activities</td>
<td>Student handouts / web-based / resources / videos / readings / case studies</td>
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<tr>
<td>Intensive Delivery (Summer School)</td>
<td>Contact hours are delivered over 5 weeks with 4 x 4 hour days delivered per week</td>
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<tr>
<td></td>
<td>Content: Combination lecture and tutorial activities</td>
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<tr>
<td></td>
<td>Assessment: Summary Table 1 - Week 1; Quiz &amp; Summary Table 2 - Week 2; Journal Article Review - Week 4; Summary Tables 3 &amp; 4 - Week 5; Case Study Assignment - Week 6</td>
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<td>Full Time</td>
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<td>Part Time</td>
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Pre-requisites: BIOH122

Co-requisites: SOCQ121
SECTION 2 – ACADEMIC DETAILS

Subject Rationale

This subject provides a comprehensive grounding in the study of pathology and disease states in conventional medicine. The emphasis in the beginning of the subject is on general pathological processes and how they affect the whole body, as well as specific body systems. These responses include inflammation, hypersensitivity, autoimmunity, immunodeficiency and neoplasia and how they give rise to clinical signs and symptoms. There will also be an introduction to the concepts associated with the study of microbiology. In the latter part of this subject the emphasis is on the disease states of the systems involved with transport and metabolism — cardiovascular, respiratory, digestive and urinary. Students also learn the pathophysiology, clinical presentations, investigation tests, and management of significant systemic disorders relating to these systems. Upon successful completion of this subject, students should be able to apply the knowledge of basic pathological processes and to analyse and critically evaluate clinical features and tests and to understand the basis for the conventional differential diagnosis of relevant disorders related to the above systems. This is a foundational subject for the further study of clinical examination and for the advanced pathology and clinical science subjects.

Learning Outcomes

1. Define the role of clinical medicine and its relationship to the disease process.
2. Identify cellular adaptations and major immune responses to stress (injury) leading to homeostatic imbalance and disease e.g. inflammation, hypersensitivity, autoimmunity, immunodeficiency, neoplasia, and infection.
3. Demonstrate the key characteristics and basic differences in biochemistry, replication and transmission of viruses, prokaryotic and eukaryotic microbes and their management.
4. Describe pathological processes and analyse how they contribute to the development of the signs and symptoms of various diseases.
5. Identify appropriate investigations and recognise abnormal results that aid in clinical management.
6. Develop clinical analysis skills to formulate clinical management plans for various diseases.

Assessment Tasks

<table>
<thead>
<tr>
<th>Type</th>
<th>Learning Outcomes Assessed</th>
<th>Session Content Delivered</th>
<th>Due</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Quiz</td>
<td>1-3</td>
<td>1-9</td>
<td>Week 6</td>
<td>20%</td>
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<tr>
<td>Summary Table 1</td>
<td>4-5</td>
<td>10-13</td>
<td>Week 7</td>
<td>5%</td>
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<tr>
<td>Summary Table 2</td>
<td>4-5</td>
<td>16-19</td>
<td>Week 9</td>
<td>5%</td>
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Prescribed Readings:


Recommended Readings:


<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1.</td>
<td>Review of the normal immune response</td>
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<tr>
<td></td>
<td>- Non-specific immunity</td>
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<tr>
<td></td>
<td>- Specific immune responses</td>
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<td></td>
<td>- Cell Adaptation</td>
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<td></td>
<td>- Inflammation</td>
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<td>- Acute</td>
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<td></td>
<td>- Chronic</td>
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<td></td>
<td>- Tissue Repair</td>
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<td>Post lecture: Videos or web resources or interactive materials</td>
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<td>2.</td>
<td>Session 2</td>
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<td></td>
<td>The Abnormal Immune Response</td>
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<td></td>
<td>- Hypersensitivity</td>
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<td>- Autoimmunity</td>
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<td>- Immunodeficiency</td>
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<td></td>
<td>Review of allergies</td>
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<td></td>
<td>Review of autoimmunity and its importance in overall health</td>
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<td>Post lecture: Videos or web resources or interactive materials</td>
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<td>3.</td>
<td>Session 3</td>
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<td>Infection</td>
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<td></td>
<td>- Causes of infection</td>
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<td>- The normal course of an infection</td>
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<td>- Presenting problems in infections</td>
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<td>- Common infections and their management</td>
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<td>Review of concept of infection control and prevention Disease transmission</td>
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<td>Chain of infection</td>
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<td>Post lecture: Videos or web resources or interactive materials</td>
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<td>4.</td>
<td>Session 4</td>
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<tr>
<td></td>
<td>Bacteria</td>
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<tr>
<td></td>
<td>- Classification, biochemistry and replication</td>
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<td></td>
<td>- Normal flora, pathogenic organisms of clinical importance</td>
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<td></td>
<td>Review structure of bacteria</td>
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<td>Antibiotic resistance</td>
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<td>Skin microbes</td>
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<td>Review of phages</td>
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<td>Post lecture: Videos or web resources or interactive materials</td>
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<td>5.</td>
<td>Session 5</td>
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<td>Viruses</td>
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<tr>
<td></td>
<td>- Classification, biochemistry and replication</td>
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<td>- Pathogenic organisms of clinical importance</td>
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<td>Review of viral structure and current treatments</td>
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<td>Use of multimedia activities where relevant</td>
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<td>HIV epidemiology and transmission &amp; replication</td>
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<td>Post lecture: Videos or web resources or interactive materials</td>
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<td>6.</td>
<td>Session 6</td>
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<td>Fungi</td>
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<td></td>
<td>- Classification, biochemistry and replication</td>
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<td>- Pathogenic organisms of clinical importance</td>
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<td></td>
<td>Parasites</td>
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<tr>
<td></td>
<td>- Classification, biochemistry and replication</td>
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<td></td>
<td>- Pathogenic organisms of clinical importance</td>
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<tr>
<td></td>
<td>Review of fungi, parasites and helminths, their biochemistry, replication, transmission and clinical treatments</td>
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<td>Post lecture: Videos or web resources or interactive materials</td>
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<tr>
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<td>Neoplasia</td>
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<td>Review on Neoplasia on concepts of cell mutation, carcinogenesis and risk factors for cancer</td>
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</tbody>
</table>
Three step model of cancer development
- Epidemiology
- Malignant vs. benign cancer: Patterns of presentation and prognosis
- Staging of cancers

Angiogenesis
- Metastasis
- Micrographs
- Post lecture: Videos or web resources or interactive materials

Session 8
Current Advances in Cancer Pathology
- Pathophysiology of cancer
- Diagnostic measures of cancer
- Treatment of cancer

Review of novel treatments
- Review of anti-angiogenic foods
- Post lecture: Videos or web resources or interactive materials

5. Session 9
Pain, Common Symptomatology
- Pain and pain management
- Headache
- Nausea and vomiting
- Cough and breathlessness
- Diarrhoea and constipation
- Anorexia and weight change
- Fatigue, malaise and lethargy
- Fever
- Skin changes and rashes

Review of the pain pathway
- Review of headaches
- Post lecture: Videos or web resources or interactive materials

Session 10
Assessment Support

6. Session 11
Gastrointestinal Tract Disorders 1
- Mouth and upper gastrointestinal tract
  - Examination and investigation of the digestive system
  - Clinical features of gastrointestinal disease
  - Diseases of the mouth
  - Diseases of the oesophagus
    - GORD
    - Hiatus hernia
    - Oesophagitis

Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to gastrointestinal disorders
- Review of GORD and Barrett’s Oesophagus
- Endoscopy
- Post lecture: Videos or web resources or interactive materials

Session 12
Gastrointestinal Tract Disorders 2
- Stomach and small intestine
  - Diseases and disorders of the stomach and duodenum

Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to gastrointestinal disorders
- Case study based review of concepts of disease relating to the stomach and small intestine
### Session 13
**Gastrointestinal Tract Disorders 3**

#### Pancreas and inflammation
- Diseases of the pancreas
- Inflammatory bowel disease
- Irritable bowel syndrome (IBS)

#### Post lecture: Videos or web resources or interactive materials

### Session 14
**Gastrointestinal Tract Disorders 4**

#### Large intestine and GI cancers
- Disorders of the colon and rectum
  - Diverticulosis
  - Constipation and problems with defecation
  - Anorectal disorders
  - Haemorrhoids
  - Anal fissure
  - Oesophageal cancer
  - Gastric carcinoma
  - Pancreatic carcinoma
  - Colorectal cancer
  - Tumours of the digestive system

#### Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to gastrointestinal disorders
#### Case study based review of concepts of disease relating to the colon and rectum
#### Post lecture: Videos or web resources or interactive materials

### NON-TEACHING WEEK
*(note that make-up classes may be scheduled in this week)*

#### Semester 1 – This aligns with the week after Easter so it may fall between Weeks 6 to 8

#### Semester 2 & Online students – The non-teaching week falls between Weeks 7 and 8

### Session 15
**Gastrointestinal Tract Disorders 5**

#### Liver and biliary tract
- Liver and biliary tract disease
- Common clinical features
- Hepatic encephalopathy
- Acute liver failure
- Chronic liver failure
- Chronic liver disease
- Cirrhosis
- Portal hypertension
- Viral hepatitis
- Alcoholic liver disease

#### Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to gastrointestinal disorders
#### Case study based review of concepts of disease relating to the liver and biliary tree
#### Post lecture: Videos or web resources or interactive materials
| Non-alcoholic fatty liver disease  |
| Inherited liver diseases         |
| Haemochromatosis                 |
| Tumours of the liver             |
| Gallstones                       |
| Cholecystitis                    |

### Session 16
**Urinary Tract Disorders 1**
- Examination and investigation of the urinary system
- Clinical features of renal disease
- Cystitis/UTIs
- Urinary incontinence
- Reflux nephropathy/Chronic pyelonephritis

Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to urinary tract disorders

Case study based review of concepts of renal hypertension and effects

Post lecture: Videos or web resources or interactive materials

### Session 17
**Urinary Tract Disorders 2**
- Renal vascular disease
- Glomerular diseases
- Kidney stones
- Nephrolithiasis

Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to urinary tract disorders

Case study based review of concepts of glomerular diseases

Post lecture: Videos or web resources or interactive materials

### Session 18
**Urinary System Disorders 3**
- Tubulo-interstitial diseases
- Acute/Chronic renal failure
- Polycystic kidney disease
- Tumours of the kidney

Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to urinary tract disorders

Case study based review of concepts of tubulointerstitial diseases

Post lecture: Videos or web resources or interactive materials

### Session 19
**Cardiovascular System Disorders 1**
- Examination and investigation of the cardiovascular system
- Clinical features of cardiovascular disease
- Disorders of heart rate, rhythm and conduction
- Complications of cardiovascular disease
- Acute circulatory failure
- Heart failure

Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to cardiovascular disorders

Case study based review of concepts of disease related to cardiac arrhythmia

Post lecture: Videos or web resources or interactive materials

### Session 20
**Cardiovascular System Disorders 2**
- Atherosclerosis
- Vascular disease

Pre-lecture: Interactive contents/web-based resources/videos, readings on the diseases related to cardiovascular disorders
<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Content</th>
</tr>
</thead>
</table>
| **11.** | **Session 21**<br>Cardiovascular System Disorders 3 | Hypertension | Case study based review of concepts of atherosclerosis and ischemic heart disease  
Case study based review of concepts of hypertension  
Post lecture: Videos or web resources or interactive materials |
|         | Coronary heart disease |  
Angina |  
Myocardial infarction |  
Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to cardiovascular disorders  
Case study based review of concepts of heart disorders and atherosclerosis  
Post lecture: Videos or web resources or interactive materials |
|         | Diseases of the heart valves |  
Diseases of the myocardium |  
Diseases of the pericardium |  
Chronic constrictive pericarditis |  
Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to cardiovascular disorders  
Case study based review of concepts of disease affecting heart valves  
Post lecture: Videos or web resources or interactive materials |
| **12.** | **Session 22**<br>Cardiovascular System Disorders 4 | Examination and investigation of the respiratory system | Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to respiratory disorders  
Review of investigation tests for various clinical features of respiratory diseases  
Post lecture: Videos or web resources or interactive materials |
|         | Clinical features of respiratory disease |  
Respiratory failure |  
Influenza |  
Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to respiratory disorders  
Review of investigation tests for various clinical features of respiratory diseases  
Post lecture: Videos or web resources or interactive materials |
| **13.** | **Session 23**<br>Respiratory System Disorders 1 | Respiratory infections | Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to respiratory disorders  
Case study based review of concept of obstructive and congenital respiratory disorders  
Post lecture: Videos or web resources or interactive materials |
|         | Respiratory infections |  
Pneumonia |  
Tuberculosis |  
Infections of the lower respiratory system |  
Respiratory diseases caused by fungi |  
Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to respiratory disorders  
Case study based review of concept of respiratory infections  
Post lecture: Videos or web resources or interactive materials |
### Pulmonary vascular disease

Session 26  
**Respiratory System Disorders 4**  
- Tumours of the bronchus and lung  
- Interstitial and infiltrative pulmonary disease  
- Lung disease due to organic dust  
- Disorders of the chest wall and pleura  
- Diseases of the diaphragm  
- Deformities of the chest wall

| Pre-lecture: Interactive contents / web-based resources/videos, readings on the diseases related to respiratory disorders  
Case study based review of concept of infiltrative diseases  
Post lecture: Videos or web resources or interactive materials |

| 14. Non-Teaching Week/Practical Examination Week 1 |
| Note that make-up classes may be scheduled in this week |

| 15. Non-Teaching Week/Practical Examination Week 2 |
| Note that make-up classes may be scheduled in this week |

| 16. Final Examination Week 1 |
| There is no final exam for this subject |

| 17. Final Examination Week 2 |
| There is no final exam for this subject |