



SUBJECT OUTLINE

Subject Name:

Clinical Nutritional Medicine

Subject Code:

NMDC221

SECTION 1 – GENERAL INFORMATION

Award/s:	Total Course Credit Points:	Level:
Bachelor of Health Science (Naturopathy)	128	3 rd Year
Bachelor of Health Science (Nutritional and Dietetic Medicine)	96	2 nd Year
Duration: 1 Semester		
Subject Coordinator: Faith Best (Brisbane Campus)		
Subject is: Core	Subject Credit Points: 6	

Student Workload:

No. timetabled hours per week: 9	No. personal study hours per week: 6	Total hours per week: 15
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Delivery Mode:

Blended Learning (Online and Live Streaming) 2 x 3 hour lectures via live streaming 2 x 1.5 hour tutorial activities / workshops online as indicated

Tutorials: Asynchronous tutor moderated discussion forum and activities

Student handouts, web-based resources

Full Time

Part Time

Pre-requisites: NMDM121, BIOC211, NMDF211

Co-requisites: BIOS222

SECTION 2 – ACADEMIC DETAILS

Subject Rationale

This subject integrates and consolidates knowledge gained from previous health science and nutritional and dietetic medicine subjects through an exploration of the nutritional management of various health conditions and individual cases. Students learn treatment strategies that incorporate dietary modification and nutritional management and learn to critically evaluate these from the perspectives of traditional empirical knowledge and evidence-based research. Potential drug-herb-nutrient interactions are critically discussed. Clinical Nutritional Medicine is an essential foundation for clinical practice.



Learning Outcomes

1. Apply professional judgement in interpreting clinical symptoms and signs, clinical examinations, and pathology testing in assessment of nutritional status and management of complex pathologies.
2. Analyse and evaluate current research to determine appropriate and effective nutritional therapeutic treatments for the management of different population groups and a variety of health conditions.
3. Determine appropriate therapeutic goals and strategies for the dietary and nutritional management of clients with complex pathologies.
4. Analyse and evaluate the evidence for potential drug-herb-food and nutrient interactions in the treatment of individual cases.
5. Discuss the advantages and limitations of nutritional supplementation and diet therapy in the management of common health conditions and individual case examples.

Assessment Tasks

Type	Learning Outcomes Assessed	Session Content Delivered	Due	Weighting
Analysis 1 (1000 words)	1, 3-4	1-8	Week 4	30%
Analysis 2 (750 words)	1-5	9-16	Week 8	30%
Portfolio (1500 words)	1-5	1-26	Week 13	40%

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

Prescribed Readings:

1. Mahan, L. K., & Raymond, J. L. (Eds.). (2017). *Krause's food & the nutrition care process* (14th ed.). Elsevier.

Recommended Readings:

1. Allman, T. (2010). *Nutrition and disease prevention*. Chelsea House.
2. Braun, L., & Cohen, M. (2014). *Herbs and natural supplements: An evidence-based guide* (4th ed., Vol. I – II). Churchill Livingstone Elsevier. [ebook available]
3. Braun, L., & Cohen, M. (2017). *Essential herbs and natural supplements*. Churchill Livingstone Elsevier.
4. Clifford, D., & Curtis, L. (2016). *Motivational interviewing in nutrition and fitness*. The Guildford Press. [ebook available]



5. Escott-Stump, S. (2015). *Nutrition and diagnosis-related care* (8th ed.). Wolters Kluwer.
6. Hechtman, L. (2018). *Clinical naturopathic medicine* (2nd ed.). Churchill Livingstone Elsevier.
7. Osiecki, H. (2014) *The nutrient bible* (9th ed.). Bio Concepts Publishing.
8. Pizzorno, J.E., & Murray, M. (2013). *Textbook of natural medicine* (4th ed.). Elsevier / Churchill Livingstone.
9. Sarris, J., & Wardle, J. (2014). *Clinical naturopathy: An evidence-based guide to practice* (3rd ed.). Churchill Livingstone Elsevier.
10. Stargrove, M. B., Treasure, J., & McKee, D. L. (2008). *Herb, nutrient and drug interactions: Clinical implications and therapeutic strategies*. Mosby Elsevier.
11. Worsely, T. (2008). *Nutrition promotion, theories and methods, systems and settings*. CABI. [ebook available]

Subject Content

Week	Lectures	Tutorials / Practicals / Workshops
1.	<p>Session 1</p> <p>Introduction (Subject Outline / Subject Aims / Assessment / Teaching Resources)</p> <ul style="list-style-type: none"> ➤ Introduction to clinical decision making ➤ Overview of developing appropriate treatment aims, treatment goals and prescriptions <p>Gastrointestinal Tract Disorders: Part 1</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Diseases of the mouth and oesophagus <ul style="list-style-type: none"> ⊗ GORD ⊗ Hiatus hernia ⊗ Oesophagitis 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the gastrointestinal system and changes associated with GORD, diseases of the stomach, duodenum and/ or small intestine, pancreatic disease/ IBS / IBD / Celiac disease.</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to a gastrointestinal tract disorders.</p>
	<p>Session 2</p> <p>Gastrointestinal Tract Disorders: Part 2</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Diseases of the stomach and duodenum <ul style="list-style-type: none"> ⊗ Dysbiosis ⊗ Ulcers ➤ Disease and infection of the small intestine <ul style="list-style-type: none"> ⊗ Food Intolerance vs Food allergy ⊗ Disease of the pancreas, including inflammation ⊗ Inflammatory Bowel Disease ⊗ Irritable Bowel Syndrome ⊗ Celiac disease 	



<p>2.</p>	<p>Session 3 Gastrointestinal Tract Disorder: Part 3 Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Large intestine (colon and rectum) <ul style="list-style-type: none"> ⊗ Diverticulitis ⊗ Constipation and Diarrhoea ⊗ Haemorrhoids ⊗ Anal fissure ⊗ Tumours of the digestive system 	<p>Pre lecture: 1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the gastrointestinal system and changes associated with diverticulitis, altered bowel movements, liver and biliary tract health.</p> <p>Post lectures: 1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to a gastrointestinal tract disorder, liver and biliary tract disorders.</p>
	<p>Session 4 Gastrointestinal Tract Disorders Part 4 Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Liver and biliary tract <ul style="list-style-type: none"> ⊗ Gallstones ⊗ Cholecystitis ⊗ Acute and chronic liver failure ⊗ Cirrhosis ⊗ Viral hepatitis ⊗ Alcoholic liver disease ⊗ Non-alcoholic liver disease 	
<p>3.</p>	<p>Session 5 Cardiovascular System Disorders</p> <ul style="list-style-type: none"> ➤ Identifying emergency situations and determining appropriate actions <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Atherosclerosis ➤ Vascular disease ➤ Hypertension ➤ Coronary heart disease ➤ Angina ➤ Myocardial infarction ➤ Primary and secondary prevention of cardiovascular disorders and events ➤ Post nutritional managements of cardiovascular disorders 	<p>Pre lecture: 1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the cardiovascular system, cerebrovascular health and circulation.</p> <p>Post lectures: 1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to a the cardiovascular system, cerebrovascular and peripheral vascular disorders.</p>
	<p>Session 6 Cerebrovascular and Peripheral Vascular Disorders Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Chilblains 	



	<ul style="list-style-type: none"> ➤ Raynaud's disease ➤ Varicose veins ➤ Varicous ulcers ➤ Hyperlipidaemia 	
4.	<p>Session 7</p> <p>Respiratory System Disorders 1</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Asthma ➤ COPD ➤ Infections of the lower respiratory system ➤ Pneumonia ➤ Bronchitis (acute and chronic) <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Infections of the upper respiratory system <ul style="list-style-type: none"> ⊗ Sinusitis ⊗ Colds and Flu ⊗ Allergic rhinitis ⊗ Otitis media 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the respiratory system, infection progression and eye health.</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases of the upper and lower respiratory system and diseases of the eyes.</p>
	<p>Session 8</p> <p>Ocular Disorders</p> <ul style="list-style-type: none"> ➤ Revision of basic pharmacology and clinical features of ocular disorders / drug schedules, history / adverse reactions <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Diseases of the eye, including: <ul style="list-style-type: none"> ⊗ Cataracts ⊗ Glaucoma ⊗ Conjunctivitis ⊗ Age-related macular degeneration ⊗ Dry eye 	
5.	<p>Session 9</p> <p>Lymphatic and Haematological Disorders</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Anaemia ➤ Iron deficiency ➤ Non-iron deficiency ➤ Thombrosis ➤ Bleeding disorders ➤ Haematological malignancies ➤ Leukaemia 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of lymphatic system, haematology and skin.</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases of the lymphatic and haematological</p>



	<ul style="list-style-type: none"> ➤ Lymphoma ➤ Multiple myeloma 	system, malignancies, skin infections, diseases of the skin and inflammatory conditions.
	<p>Session 10</p> <p>Integumentary System Disorders</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Eczema ➤ Psoriasis ➤ Lichen planus ➤ Skin infections ➤ Acne vulgaris ➤ Rosacea ➤ Pressure sores ➤ Skin tumours 	
6.	<p>Session 11</p> <p>Musculoskeletal System Disorders</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Inflammatory joint diseases: <ul style="list-style-type: none"> ⊗ Osteoarthritis ⊗ Rheumatoid arthritis ⊗ Gout ➤ Diseases of the bone including; <ul style="list-style-type: none"> ⊗ Osteoporosis ⊗ Osteomalacia and rickets ⊗ Paget's disease ⊗ Bone tumours ⊗ Fibromyalgia 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the musculoskeletal system, renal system including the urinary tract.</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases and disorders of the musculoskeletal system, the urinary tract and kidneys.</p>
	<p>Session 12</p> <p>Urinary Tract Disorders</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Cystitis / Urinary tract infections (UTIs) ➤ Urinary incontinence ➤ Kidney stones ➤ Nephrocalcinosis ➤ Polycystic kidney disease 	
7.	<p>Session 13</p> <p>Endocrine System Disorders</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Thyroid: <ul style="list-style-type: none"> ⊗ Grave's Disease 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the thyroid, adrenal glands and endocrine system.</p>



	<ul style="list-style-type: none"> ⊙ Hashimoto's Disease ⊙ Parathyroid diseases ⊙ Adrenal disease ⊙ Cushing's syndrome ⊙ Addison's disease ⊙ Hyperaldosteronism 	<p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases of the, thyroid and endocrine system.</p>
	<p>Session 14</p> <p>Endocrine Disorders 2</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Pancreatitis ➤ Diabetes Mellitus 1 ➤ Diabetes Mellitus 2 	
<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 – The non-teaching week falls between Weeks 7 and 8</p>		
8.	<p>Session 15</p> <p>Male Reproductive Disorders</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Prostate disorders <ul style="list-style-type: none"> ⊙ Gynaecomastia ⊙ Klinefelter's syndrome ⊙ Hypogonadism ➤ Penile and testicular disorders, including cancer 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the male reproductive organs and health, and sexually transmitted disease summary.</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases of the male reproductive system and sexually transmitted diseases</p>
	<p>Session 16</p> <p>Sexually Transmitted Infections</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Sexually transmitted diseases <ul style="list-style-type: none"> ⊙ Viral ⊙ Bacterial ⊙ Fungal 	
9.	<p>Session 17</p> <p>Female Reproductive Disorders 1</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Female Reproductive disorders <ul style="list-style-type: none"> ⊙ Delayed puberty ⊙ Menstrual disorders ⊙ Turner's syndrome ⊙ Hirsutism ⊙ Pelvic inflammatory disease 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of female reproductive organs and health</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the</p>



	<ul style="list-style-type: none"> ⊗ Poly cystic ovary disease ⊗ Uterine disorders 	<p>application of nutritional therapeutic management to diseases and disorders of female reproduction.</p>
	<p>Session 18</p> <p>Female Reproductive Disorders 2</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ⊗ Breast disorders: <ul style="list-style-type: none"> ⊗ Mastitis ⊗ Fibrocystic changes ⊗ Benign neoplasms ⊗ Infertility 	
10.	<p>Session 19</p> <p>Paediatric Disorders 1</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ⊗ Croup ⊗ Whooping cough ⊗ Mumps ⊗ Measles ⊗ Chicken Pox ⊗ Teething ⊗ Rubella ⊗ Leukaemia 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the paediatric and geriatric health, ageing and common disorders.</p> <p>Post lectures:</p> <p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases within paediatric and geriatric age groups.</p>
	<p>Session 20</p> <p>Geriatric Conditions and Healthy Aging</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ⊗ Malnutrition ⊗ Oral health ⊗ Incontinence and constipation ⊗ Chronic conditions ⊗ Physical injuries ⊗ Substance abuse ⊗ Mental health 	
11.	<p>Session 21</p> <p>Nervous system Disorders 1</p> <p>Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ⊗ Headaches and migraines ⊗ Insomnia ⊗ ADHA ⊗ CNS infections 	<p>Pre lecture:</p> <p>1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the nervous system, nerve health and sleep patterns.</p> <p>Post lectures:</p>
	<p>Session 22</p>	



	<p>Nervous system Disorders 2 Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Inflammatory and degenerative diseases ➤ Parkinson's disease ➤ Multiple sclerosis ➤ Alzheimer's disease 	<p>1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases of the nervous system and disease progression.</p>
12.	<p>Session 23 Nervous System Disorders 3 Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Mood disorders ➤ Anxiety disorders ➤ Eating disorders ➤ Drug abuse 	<p>Pre lecture: 1.5 hour revision activities, including online, interactive, web-based information of the physiology, anatomy and general biochemistry of the nervous system and neurotransmitter function.</p> <p>Post lectures: 1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management to diseases the nervous system and multiple system disorders.</p>
	<p>Session 24 Multi-System Disorders Nutritional Therapeutic Management of:</p> <ul style="list-style-type: none"> ➤ Hypertension ➤ Chronic Fatigue Syndrome ➤ Cystic Fibrosis ➤ SLE ➤ Metabolic syndromes 	
13.	<p>Session 25 Compounding Workshop 1</p> <ul style="list-style-type: none"> ➤ Compounding ingredients and excipients (why you might include these) ➤ List of ingredients ➤ Basic formulating skills 	<p>Pre lecture: 1.5 hour revision activities, including online, interactive, web-based information of compounding ingredients, basic formulating skills, important elements of consideration including doses and costing.</p>
	<p>Session 26 Compounding Workshop 2</p> <ul style="list-style-type: none"> ➤ Therapeutic doses and calculating formulations 	<p>Post lectures: 1.5 hour consolidation learning activities online worksheets, case studies and activities for the application of nutritional therapeutic management specifically a nutrition compound to any disease state discussed in week 1-12.</p>
14-15.	<p>Non-Teaching Weeks / Practical Examination Weeks 1 & 2 Note that make-up classes may be scheduled in these weeks</p>	
16-17.	<p>Final Examination Weeks 1 & 2 There is no final exam for this subject</p>	