



# SUBJECT OUTLINE

Subject Name:

**Sports Nutrition**

Subject Code:

**NMDS311**

## SECTION 1 – GENERAL INFORMATION

<b>Award/s:</b>	<b>Total Course Credit Points:</b>	<b>Level:</b>
Bachelor of Health Science (Myotherapy)	96	3 <sup>rd</sup> Year
Bachelor of Health Science (Nutritional and Dietetic Medicine)	96	3 <sup>rd</sup> Year
<b>Duration:</b> 1 Semester		
<b>Subject Coordinator:</b> Lisa Phillips (Sydney Campus)		
<b>Subject is:</b> Core	<b>Subject Credit Points:</b> 2	

### Student Workload:

<b>No. timetabled hours per week:</b> 3	<b>No. personal study hours per week:</b> 2	<b>Total hours per week:</b> 5
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#### Delivery Mode:

Face to Face (On Campus)	1 x 2 hour lecture	1 x 1 hour tutorial / practical
Blended Learning (Online and Live Streamed)	1 x 2 hour synchronous lecture (live streamed)	1 x 1 hour tutorial activities / workshops online as indicated
Intensive Delivery (Summer School)	Contact hours are delivered over 5 weeks with 2 x 4 hour days delivered per week Content: Combination lecture and tutorial activities Assessment: Case Study - Week 3; Report - Week 5; Final Written Exam - Week 6 Full Time Part Time	
<b>Pre-requisites:</b>	NMDF121	
<b>Co-requisites:</b>	Nil	

## SECTION 2 – ACADEMIC DETAILS

### Subject Rationale

This subject introduces students to the specific nutritional requirements for athletes with emphasis placed on the practical application of sports nutrition guidelines and practices. Students will critically evaluate the science and practice of sports nutrition and review the principles and research underpinning current recommendations. Sports-related nutritional deficiencies and eating behaviours will be discussed. Students will explore current and emerging



sports nutrition dietary information and apply this learning to the development of dietary programs for optimal nutritional health in specific sports and populations of athletes.

## Learning Outcomes

1. Highlight the basic nutrients, their source and quantity required to support athletes in the maintenance of optimal performance and health.
2. Consider the practices and processes involved in body composition assessment and how this relates to the athlete.
3. Formulate appropriate strategies and goals for the dietary and nutritional management of athletes, including special athletic populations.
4. Critically evaluate current evidence-based literature relating to supplement requirements and their appropriate application for athletic performance.

## Assessment Tasks

Type	Learning Outcomes Assessed	Session Content Delivered	Due	Weighting
<b>Case Study</b> (1500 words)	1-3	1-6	Week 7	30%
<b>Report</b> (1200 words)	1-4	1-12	Week 13	30%
<b>Final Written Exam</b> Case-based (2 hours)	1-3	1-13	Final Examination Period	40%

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

### Prescribed Readings:

1. Burke, L., & Deakin, V. (2015). *Clinical sports nutrition* (5th ed.). McGraw Hill. [ebook available]

### Recommended Readings:

1. Burke, L. (2007). *Practical sports nutrition*. Human Kinetics Publishers.
2. Burke, L., & Cox, G. (2010). *The complete guide to food for sports performance* (3rd ed.). Allen & Unwin. [ebook available]
3. Cardwell, G. (2012). *Gold medal nutrition* (5th ed.). Human Kinetics Publishers. [ebook available]



**Resources:**

1. Australian Institute of Sport. (n.d.). *Nutrition*. <https://www.ais.gov.au/nutrition>
2. Sports Dietitians Australia. (n.d.). *Recipes*. <https://www.sportsdietitians.com.au/recipes/>

Subject Content		
Week	Lectures	Tutorials / Practicals
1.	<p><b>Introduction</b> (Subject Outline / Subject Aims / Assessment / Teaching Resources)</p> <p><b>Exercise fuel and physiology</b></p> <ul style="list-style-type: none"> <li>➤ Physiological bases of exercise</li> <li>➤ Exercise metabolism</li> <li>➤ Training adaptation principles</li> <li>➤ Skeletal muscle</li> <li>➤ Exercise intensity on muscle fuel utilisation</li> </ul>	<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> <ul style="list-style-type: none"> <li>➤ Readings</li> <li>➤ Videos</li> <li>➤ Learning platform introduction activity</li> </ul>
2.	<p><b>Body Composition and Nutrition Assessment</b></p> <ul style="list-style-type: none"> <li>➤ Body composition assessment methods</li> <li>➤ Application and limitations of methods</li> <li>➤ Measuring nutritional status</li> </ul>	<ul style="list-style-type: none"> <li>➤ Readings Research and summary table Choose 2 assessment methods to research and summarise</li> <li>➤ Case study activity</li> </ul>
3.	<p><b>Carbohydrates</b></p> <ul style="list-style-type: none"> <li>➤ Requirements</li> <li>➤ Sources and types</li> </ul>	<ul style="list-style-type: none"> <li>➤ Readings</li> <li>➤ Online class discussion</li> </ul>
4.	<p><b>Protein and Fats</b></p> <ul style="list-style-type: none"> <li>➤ Requirements</li> <li>➤ Sources and types</li> </ul>	<ul style="list-style-type: none"> <li>➤ Readings</li> <li>➤ Video <ul style="list-style-type: none"> <li>⊖ Protein powder research activity sharing findings with class</li> </ul> </li> </ul>
5.	<p><b>Endurance Sports</b></p> <ul style="list-style-type: none"> <li>➤ Requirements</li> <li>➤ Race day nutrition</li> <li>➤ Training nutrition</li> <li>➤ Injury nutrition</li> </ul>	<ul style="list-style-type: none"> <li>➤ Case study <ul style="list-style-type: none"> <li>⊖ Class collaboration online</li> </ul> </li> </ul>
6.	<p><b>Hydration and Electrolytes</b></p> <ul style="list-style-type: none"> <li>➤ Requirements</li> <li>➤ Assessment</li> <li>➤ Electrolytes</li> <li>➤ Fatigue</li> <li>➤ Cramps and stitches</li> <li>➤ Supplements</li> </ul>	<ul style="list-style-type: none"> <li>➤ Video</li> <li>➤ Sweat volume and rate practice exercise</li> <li>➤ Sports drink research activity and class discussion <ul style="list-style-type: none"> <li>⊖ Brands and ingredients</li> <li>⊖ Sports drink recipe activity</li> </ul> </li> </ul>



7.	<b>Weight / Muscle Gain for Sport</b> <ul style="list-style-type: none"> <li>➤ Protein and energy requirements</li> <li>➤ Challenges and barriers</li> <li>➤ Weight/muscle gain methods</li> <li>➤ Skeletal muscle protein metabolism BCAA</li> </ul>	<ul style="list-style-type: none"> <li>➤ Case study <ul style="list-style-type: none"> <li>⌚ Make a three day meal plan for an endurance athlete and a power athlete wanting to gain weight</li> </ul> </li> </ul>
<b>NON-TEACHING WEEK</b> (note that make-up classes may be scheduled in this week) <b>Semester 1</b> – This aligns with the week after Easter so it may fall between Weeks 6 to 8 <b>Semester 2 &amp; Online students</b> – The non-teaching week falls between Weeks 7 and 8		
8.	<b>Weight Making Practices in Sports</b> <ul style="list-style-type: none"> <li>➤ Energy metabolism during exercise</li> <li>➤ Benefits and risks of weight loss</li> <li>➤ Challenges and barriers</li> <li>➤ Weight / fat loss methods</li> </ul>	<ul style="list-style-type: none"> <li>➤ Readings</li> <li>➤ Videos</li> <li>➤ Online class discussion</li> </ul>
9.	<b>Diets for Special Athletic Populations - Part 1</b> <ul style="list-style-type: none"> <li>➤ Vegetarian diets</li> <li>➤ Gluten free diets</li> <li>➤ Diabetes and sports nutrition</li> </ul>	<ul style="list-style-type: none"> <li>➤ Readings</li> <li>➤ Case study</li> <li>➤ Class collaboration online</li> </ul>
10.	<b>Power and Team Sports</b> <ul style="list-style-type: none"> <li>➤ Requirements</li> <li>➤ Race day nutrition</li> <li>➤ Training nutrition</li> <li>➤ Injury nutrition</li> </ul>	<ul style="list-style-type: none"> <li>➤ Case study <ul style="list-style-type: none"> <li>⌚ Make a three day meal plan for a power sport and team sport athlete</li> </ul> </li> </ul>
11.	<b>Diets for Special Athletic Populations - Part 2</b> <ul style="list-style-type: none"> <li>➤ Disordered eating in athletes</li> <li>➤ Female athlete triad</li> <li>➤ Over training syndrome</li> </ul>	<ul style="list-style-type: none"> <li>➤ Readings</li> <li>➤ Research activity</li> <li>➤ Case study</li> <li>➤ Class collaboration online</li> </ul>
12.	<b>Supplements</b> <ul style="list-style-type: none"> <li>➤ Australian Institute of Sport (AIS) sport supplement program</li> <li>➤ AIS anti-doping policy</li> <li>➤ How supplements should be used</li> <li>➤ Deficiency in athletes</li> <li>➤ Antioxidants and vitamins</li> <li>➤ Key evidence based supplements and doses</li> <li>➤ Common supplements</li> <li>➤ Injury supplements</li> <li>➤ Supplements for junior athletes</li> </ul>	<ul style="list-style-type: none"> <li>➤ Reading <ul style="list-style-type: none"> <li>⌚ Research activity</li> </ul> </li> </ul>
13.	<b>Travelling Athlete</b>	<ul style="list-style-type: none"> <li>➤ Case Study</li> </ul>



	<ul style="list-style-type: none"> <li>➤ Preparing for travel</li> <li>➤ Resources for athletes</li> <li>➤ Catering for athletes</li> </ul>	<ul style="list-style-type: none"> <li>⓪ Create a travel plan for an athlete travelling overseas to compete in an international event</li> </ul>
14.	<b>Non-Teaching Week/Practical Examination Week 1</b> Note that make-up classes may be scheduled in this week	
15.	<b>Non-Teaching Week/Practical Examination Week 2</b> Note that make-up classes may be scheduled in this week	
16.	<b>Final Examination Week 1</b> Students are required to sit examinations using the Respondus Lockdown Browser software per the <a href="#">Examination Policy – Higher Education</a> . Refer to your local campus calendar for exam opening and closing times.	
17.	<b>Final Examination Week 2</b> Students are required to sit examinations using the Respondus Lockdown Browser software per the <a href="#">Examination Policy – Higher Education</a> . Refer to your local campus calendar for exam opening and closing times.	