



# SUBJECT OUTLINE

Subject Name:

**Sports Nutrition**

Subject Code:

**NMDS3**

## SECTION 1 – GENERAL INFORMATION

Award/s:

Undergraduate Certificate in Building Health through Nutrition

Total Course Credit Points:

12

Level:

1<sup>st</sup> Year

Duration:

1 Semester

Subject is:

Elective

Subject Credit Points:

2

### Student Workload:

No. timetabled hours per week:

3

No. personal study hours per week:

2

Total hours per week:

5

Delivery Mode\*:

☐ On campus

☒ Online / Digital

☐ Blended

☐ Intensive

Weekly Session^ Format/s - 1 session per week:

☒ Livestream lectures:

☐ 2 hours

☒ 3 hours

1 x 3 hour lecture per week

\* All modes are supported by the online learning management system which will include subject documents such as handouts, readings, assessment guides and elearning support modules.

^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:

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. Identify the key nutrients, their source and quantity required to support athletes in the maintenance of optimal performance and health.
2. Describe 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 supplementation and appropriate application for athletic performance.

## Assessment Tasks

Type	Learning Outcomes Assessed	Session Content Delivered	Due	Weighting
<b>Case Study</b> (2000 words)	1-3	1-6	Week 7	45%
<b>Final Written Exam</b> Case-based (2 hours)	1-4	1-13	Final Examination Period	55%
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	Personal Study Activities
1.	<b>Introduction</b> (Subject Outline / Subject Aims / Assessment / Teaching Resources) <b>Exercise fuel and physiology</b> <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.	<b>Body Composition and Nutrition Assessment</b> <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</li> <li>➤ Video</li> <li>➤ Learning journal activity</li> <li>➤ Body composition selection activity</li> </ul>
3.	<b>Carbohydrates</b> <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>➤ Review questions</li> </ul>
4.	<b>Protein and Fats</b> <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</li> <li>➤ Learning Journal activity - Protein powder research activity</li> </ul>
5.	<b>Endurance 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</li> <li>➤ Learning Journal activity</li> <li>➤ Review questions</li> </ul>
6.	<b>Hydration and Electrolytes</b> <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>➤ Readings</li> <li>➤ Review questions</li> <li>➤ Videos</li> <li>➤ Sweat volume and rate practice exercise</li> <li>➤ Learning Journal activity: Sports drink research</li> <li>➤ Sports drink recipe activity</li> </ul>
7.	<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</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 / 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>➤ Review questions</li> <li>➤ Case study</li> </ul>
9.	<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>➤ Review questions</li> <li>➤ Case study</li> </ul>
10.	<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>➤ Review questions</li> <li>➤ Meal planning activity</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>➤ Learning Journal activity</li> <li>➤ Case study</li> <li>➤ Review questions</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>➤ Review questions</li> <li>➤ Learning journal activity</li> </ul>
13.	<b>Travelling Athlete</b> <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>➤ Review questions</li> <li>➤ Case Study               <ul style="list-style-type: none"> <li>⌚ Create a travel plan for an athlete travelling overseas to compete in an international event</li> </ul> </li> </ul>
14.	<b>Non-Teaching Week/Practical Examination Week 1</b>	



	Note that make-up classes may be scheduled in this week
<b>15.</b>	<b>Non-Teaching Week/Practical Examination Week 2</b> Note that make-up classes may be scheduled in this week
<b>16.</b>	<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 the LMS for exam opening and closing times.
<b>17.</b>	<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 the LMS for exam opening and closing times.