

# BIOS 2011 EXERCISE NUTRITION, BODY COMPOSITION AND WEIGHT CONTROL

**Credit Points 10**

**Legacy Code 400884**

**Coordinator** Peter Clothier (<https://directory.westernsydney.edu.au/search/name/Peter Clothier/>)

**Description** In 2016, this unit is replaced by 401141 - Exercise Nutrition. This unit provides students with an understanding of the interdependent areas of nutrition, body composition and body weight control within the context of sport, physical activity, and exercise. Nutritional needs and recommendations for all levels and types of physical activity are covered along with the links between nutrition and health, body composition, control of body weight and composition. Students will develop skills in nutritional analysis, body composition assessment and the development of exercise programs for weight control. Students will use these skills and knowledge in the individualisation of advice on exercise nutrition and body composition control.

**School** Health Sciences

**Discipline** Human Biology

**Student Contribution Band** HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 2 subject

**Pre-requisite(s)** NATS 1009 AND  
NATS 1010 AND  
BIOS 1015

**Restrictions** Students must be enrolled in 4658 Bachelor of Health Science (Sport and Exercise Science).

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Describe the dietary guidelines and the recommended servings of the core food groups recommended by the National Health and Medical Research Council and other internationally recognized governing bodies.
2. Describe the physiological functions of the macronutrients (carbohydrates, fats and protein) and micronutrients (vitamins, minerals and water).
3. Analyze a diet for its energy, macronutrient and micronutrient content, as well as describe the strengths, weaknesses and limitations of the commonly used methods for measuring and analyzing dietary intake.
4. Describe and discuss the role of nutrition and ergogenic supplements in optimizing exercise performance.
5. Describe the assumptions and limitations of common methods body composition assessment including BMI, waist hip ratio, skinfolds, body composition estimates (from regression equations) and other indices, and demonstrate the knowledge and ability to use a range of body composition and anthropometry measures to service athletes, apparently healthy and obese individuals.
6. Explain the relationship between energy balance and control of body composition.
7. Provide general nutrition advice to promote, achieve and maintain healthy and sport performance related body weights.
8. Explain the nutritional, health and psychological risks of common fad and popular diets.
9. Explain the importance of behavioral modification and other strategies to help individuals to incorporate and adhere to appropriate dietary strategies that support achieving and maintaining a healthy body mass.

## Subject Content

1. General dietary guidelines and recommendations for health and physical performance
2. Dietary analysis: methods, applications and limitations of methods
3. Digestive processes and nutrient absorption kinetics
4. Physiological function of macronutrients and micronutrients with an emphasis on their roles related to energy metabolism and exercise
5. Methods of measuring, estimating and interpreting body composition
6. Body mass, fat mass, fat distribution and disease risk
7. Estimating individual energy requirements and energy expenditure
8. Sport-specific nutrition and hydration for optimizing performance, recovery & physiologic adaptation
9. Nutritional supplements and ergogenic aids
10. Nutritional disorders: prevalence, signs, symptoms and key physiological effects
11. Discipline specific OH&S ? related to practical tasks of the unit

## Special Requirements

Legislative pre-requisites

Prior to enrolling in this subject, students must have:

- 1) submitted a Student Undertaking Form and have applied for a National Police Certificate;
- 2) submitted Working with Children Check Student Declaration;
- 3) possess a current WorkCover Authority approved First Aid Certificate.

Prescribed Texts

- Jeukendrup, A. E., & Gleeson, M. (2010). Sport nutrition: An introduction to energy production and performance (2nd ed.). Champaign, IL: Human Kinetics.
- Seigler, J. (2012). Exercise Nutrition, Body Composition and Weight Management: Laboratory Manual. Sydney: University of Western Sydney.
- Manual to be provided by Western Sydney University Connect

Teaching Periods