

# HLTH 2012 NUTRITION AND HEALTH 1

**Credit Points** 10

**Legacy Code** 300933

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**Description** Nutrition is the science that applies knowledge of the nutritional components of foods to ensure the wellbeing of the human body. This subject presents the basic principles and concepts of human nutrition including nutrient requirements, functions, deficiency symptoms and the effects of dietary excess as well as energy balance and weight control. Students will gain a general understanding of the macronutrients such as carbohydrates, proteins and lipids in human metabolism, energy release and common diseases and disorders such as obesity, malnutrition, diabetes etc. The role of water and electrolytes in cellular and tissue functions, as well as alcohol metabolism and its impact on human health will be covered. The micronutrients are also studied, including the properties, general requirements, functions and the effects of deficiency and excess consumption of vitamins and essential minerals.

**School** Science

**Discipline** Food Science and Biotechnology

**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

**Equivalent Subjects** HLTH 2011 - Nutrition and Health 1

**Assumed Knowledge**

Sound understanding of undergraduate Level 1 chemistry and biology.

## Learning Outcomes

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

1. Understand and evaluate the role of nutrition in human health.
2. Demonstrate an understanding of nutrient intake requirements and recommended dietary allowances.
3. Demonstrate an understanding of the human digestive system and the metabolism of macro and micro nutrients and effects of deficiency and excesses to human health.
4. Understand the health and social issues linked to alcohol intake in general population.
5. Understand the role of essential fatty acids, amino acids, water, electrolytes in the diet and their roles in human health.
6. Solve numerical problems e.g., Body Mass Index, energy content in foods, and interpret its impact on human health.
7. Apply the knowledge gained through lectures and tutorial discussions to address the contemporary health issues in Australian population.
8. Demonstrate the communication skills through group discussion, scientific literacy and essay writing.

## Subject Content

- Basic concept of nutrition, food components and its relationships to health and disease
- understand food groups, dietary guidelines, nutrients requirements and Nutrient reference values
- physiology of digestion, absorption and metabolic pathways involving carbohydrates, proteins and lipids and their Roles in maintaining human health
- covers diet related health Issues such obesity and diabetes, protein calorie malnutrition, alcohol and health, electrolyte Balance in body etc
- energy Balance, underweight, obesity and weight management, energy Calculation, body Mass Index, Basel metabolic rate etc
- Roles of all of vitamins and Essential minerals in health and nutrition e.g., general properties, sources, Recommended Daily Allowance, functions, physiology and deficiency diseases
- Current issues such as health related foods nutraceuticals and functional foods, pre- and probiotics, Omega 3 fatty acids, food fortification etc

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/Group Task
Take-home mid-semester exam	1 week	30	N	Individual
Essay	3,000 words	30	N	Individual
Final Exam	2 hours	40	N	Individual

Prescribed Texts

- Mann, J & Truswell, AS (eds) 2012, Essentials of human nutrition, 4th edn, Oxford University Press, Oxford.

Teaching Periods