

Module Specification

Module Summary Information

1	Module Title	Principles of Nutritional Biochemistry and Metabolism
2	Module Credits	20
3	Module Level	4
4	Module Code	HSC4097

5	Module Overview
<p>This module will cover the fundamentals of biochemistry and its link to nutrition so as to provide a solid understanding of how human biochemistry underpins food and nutrition sciences, and how nutrients and non-nutrients impact on body functions and metabolic pathways.</p> <p>In line with the overall programme philosophy and aims, this module enables you to develop many applied and transferable skills required as a modern-day food and nutrition scientists who deal with individuals, communities, industry and the public sector (nationally and internationally).</p> <p>You will participate in scholarly activity enabling the development of independent learning skills. Engaging in practical workshops is crucial in developing your ability to carry out nutritional assessments, dietary intake evaluation and link this to the government guidelines and recommendations. Your participation with pre- and post- directed learning resources and activities will also help you develop skills in effective communication; investigating and researching relevant literature; working independently and as a team member. In addition, the module will support you in developing critical evaluation skills; problem solving and decision making; all relevant and required skills for your future career as a food and nutrition scientists.</p> <p>This module provides a foundation to learning and understanding concepts that will be addressed in other modules of the programme.</p>	

6	Indicative Content
<p>This module will introduce you to scientific principles underpinning food and nutritional sciences, including the biochemistry of nutrients and non-nutrients and their metabolism by the human body. The integration of metabolism in specific situations (e.g. starvation, exercise, obesity, and diabetes), the basic principles of metabolism and the regulation of metabolic pathways in the human body will also be examined.</p> <p>You will explore the fundamentals of human nutrition, including the dietary requirements for macro and micronutrients, the non-nutritive components of foods, and the approaches to assessing nutritional status in populations and individuals. You will also learn how to use nutritional assessment techniques, food composition tables, explore dietary reference values, dietary surveys, and government guidelines.</p> <p>The module will allow you to carry out anthropometric analyses and dietary requirements assessments using a range of tools as well as developing practical skills essential as a food and nutrition scientists. You will also begin to consider the contribution of food and nutritional sciences in establishing public health priorities.</p>	

7	Module Learning Outcomes	
	On successful completion of the module, students will be able to:	
	1	Evaluate the requirements, sources, functions and consequences of deficiency/excess of dietary nutrients and their provision in energy metabolism and generation.
	2	Describe the importance of diet and nutrition in the regulation of essential metabolic processes and maintenance of a healthy body.
	3	Interpret and evaluate data from specific nutritional and dietary assessments, using appropriate analytical methods to assess individual's health status.
	4	Recall the current nutritional recommendations and guidelines for the general population and apply them to evaluate the adequacy of diets.

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1-4			x

9	Breakdown Learning and Teaching Activities	
Learning Activities		Hours
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable		50
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE		Between 50-60
Private Study (PS) includes preparation for exams		Between 90-100
Total Study Hours:		200