

## Level 4 (Year 1) Summary of Module Content

### Thinking Critically 20 Credits

Nutrition is a far-reaching and complex field of science with a range of external influences impacting on the integrity and consistency of information available to scientists, health professionals and the general public. During this module you will have the opportunity to explore the importance of searching effectively for information online; what constitutes good science and why; and the challenges of providing information emanating from science in an ethical manner. You will begin to think critically and reflectively about your personal study objectives and future career pathways.

### Nutritional Biochemistry 40 Credits

Nutritional biochemistry underpins nutritional science. This module taught over two terms provides substantive time to engage with this exciting aspect of bioscience. Over the course of two terms you will have the opportunity to develop your understanding of the vital roles of macro, micro, phytonutrients and water in normal biochemical processes and begin to explore disordered biochemistry as it relates to environmental toxicity, obesity and genetics. Accurately collecting, recording, and interpretation of nutritional data is fundamental and you will have opportunities to analyse a range of diet and related data and present findings in a variety of useful formats relevant to future careers. You have the opportunity to conduct and report on simple experiments and begin to consider scientific principles including sensitivity and reliability and safety issues related to lab work.

### Public Health Nutrition 20 Credits

Improving the health of the general public is a global socio-economic concern. This module enables you to explore the importance of a range of key public health messages including: guidelines for nutrient intakes; 5-A-Day, requirements for vitamin D, fortification of bread with folic acid; salt and sugar intake; fat and cholesterol; weaning; food labels; physical activity; body measurements, inter-country variation. You should develop skills to disseminate public health messages in a socially relevant context and in a manner that the public can understand through the production of leaflets, articles and public-centred presentations. You will explore the notion of a 'well-balanced' diet, special diets, food storage, cooking, transport and farming methods and principles of food safety in context of hygiene and contaminants; agencies providing public health messages; the strengths and limitations of public health approaches and application to individuals.

### Applied Physiology 20 Credits

You will be able to build on your knowledge of anatomy and physiology and focus on how the major body systems are controlled and integrated so that you can demonstrate a coherent understanding of the mechanisms that keep the body alive and functioning. This module introduces concepts of Systems Biology and Functional Medicine with a view to enhancing your understanding of purpose and design and applied strategies to support organ reserve. You will have the opportunity to explore at some depth how changes in the hormonal and nervous systems can occur in response to stress and how this might impact on nutritional status.

### Personalised Dietary Education 20 Credits

This module focuses on developing knowledge and skills to provide dietary education. The module includes a variety of approaches across a range of social, ethical, and cultural contexts including vegan and vegetarian diets; eating on a budget; nutrition in pregnancy, feeding babies, children and families; hypoallergenic, cardio and cancer protective diets; supporting mood and vitality. The strengths and limitations of dietary education are explored. Communication and coaching strategies are included and students practice analysing diets and providing dietary educator consultations.

## Level 5 (Year 2) Summary of Module Content

### Applied Pathophysiological Reasoning (APR) 40 Credits

Building upon the breadth of knowledge and skills gained during level 4 this module is taught over two terms and provides you with the opportunity to review current medical paradigms and a systems biology approach to understanding health and disease. You will further explore the differences between population and personalised approaches to the management of chronic disease and the processes going wrong in the body that are common to many similar and disparate illnesses. The module has a major focus enabling you to reason about mechanisms that drive illness, repair processes, and the use of relevant assessments to gather and interpret individual biomarker data to help inform nutrition interventions. The module introduces differential diagnosis and the types of signs and symptoms 'red-flags' that merit referral to medical practitioners.

### Food Science & Safety 20 Credits

This module aims to provide you with knowledge of some of the key challenges facing nutrition professionals in the food industry. It will explore the concepts of food quality and safety with links to health issues beyond acute food poisoning. The legal and regulatory framework for food production and marketing is reviewed. This module provides an opportunity for you to explore how new developments in health and technology impact on food production and product innovation to offer foods with functional benefits.

### Research Methods 20 Credits

Developing discerning research skills are essential for the nutrition scientist. This module complements APR and aims to further develop your understanding of the scientific method and the statistical approaches that underpin nutritional and biomedical research, the ability to reason cogently about pathology, and evidence based practice. The module aims for you to develop skills to critically review research papers, apply search strategies that are systematic and use tools that can be used for the statistical analysis of research data.

### Nutrition in Practice 20 Credits

This module explores how the nutrition profession has developed over time. You will be encouraged to examine the roles and influences of legislation, professional and regulatory bodies and political influences impacting nutrition practice as it applies to clinical and industry settings. This module includes 50 hours of entrepreneurial online work experience; it encourages you to draw on your own experiences and those of your peers; to identify an area of nutrition practice of personal interest and consider the future opportunities and challenges that may lie ahead. To help you with this process you will be introduced to an expanded range of reflective models to further develop your reflective skills and work closely with the Professional Mentor.

### Food Supplements and Pharmacology 20 Credits

Central to this module is gaining an understanding of drug-nutrient interactions with a view to justifying 'safe' nutritional interventions in context of upper safe limits. This module also follows on from APR and you will review the mechanisms of action of various drugs and nutraceuticals and their impact on physiology and disease intervention. You will explore the synergistic action of nutrients and drug/nutrient interactions through the analysis of their mechanisms of action on physiological processes and disease processes. Food law governing nutritional products will also be reviewed. Application of food supplements at both individual and population levels are considered.

## Level 6 (Year 3) Summary of Module Content

### Personalised Nutrition Interventions 20 Credits

Gaining a deep understanding of personalised and individualised nutrition as an approach to the prevention and management of functional imbalances and chronic disease is a main focus. You should develop an understanding of complexity in health and explore nutritional intervention strategies to support optimal function and healthy aging while taking into account social, cultural and ethical factors influencing health and wellbeing. This module draws on emerging scientific research from the field of nutrigenomics on the potential harmful effects of inappropriate nutrition, environmental toxins and lifestyle factors on a wide range of issues relating to human health.

### Health Culture 20 Credits

This module aims to explore the changes in individual responsibility for health over the past century, the present and what the future might bring. In this context the module will explore inequalities in health care provision and the ability of individuals to assume such responsibility for their health. You will work with peers to analyse data, theorise and evaluate cultural drivers and barriers to change as well as critically and reflectively review your own leadership ideas and business practices to inform the design of engaging, ethical and sustainable change management interventions across a range of global community healthcare environments.

### Research Project 40 Credits

Conducting research individually or as part of a group provides you with an opportunity to embrace the scientific literature at a deep level. You will work with a Research Supervisor throughout the process who will support you and at the same time encourage you to become an independent researcher from project planning through to final write-up of your project. Drawing on your learning from the course there will be a range of styles of project for you to consider. Whether conducting research independently or as part of a group, students are expected to produce their project written in the style, format & discipline compatible with published research and present findings to their peers.

### Contemporary Issues in Food & Nutrition 20 Credits

This module engages with a range of contemporary issues that are at the 'leading edge' of debate within the industry, science, research, politics, media and public consciousness. The Module will explore, in a balanced way, a range of potentially controversial issues with the aim of supporting students further develop critical analytical thinking skills to build evidence based arguments and consider how change and interventions can best be supported by science and research. The module compliments both Health Culture and the Research Project. The Module is designed to also support graduates who wish to engage in NGO work and/or campaigning for change.

### Nutrition Enterprise 20 Credits

You will have the opportunity to prepare for your future career pathway building on your evaluation and learning from Nutrition in Practice as well as learning from level 6 modules. Whether seeking employment in the public sector or to start your own nutrition business, the module will encourage you to consider the value of business enterprise, entrepreneurship, intrapreneurship and the importance of global interconnectedness. Based on a thorough understanding of the health and nutrition workplace environments, including corporate, clinical practice and community-based projects within local, national and international environments, opportunities will be provided for you to evaluate the actions required to attain your professional goals. This will be supported through the generation of a professional portfolio to demonstrate a range of experiences, competencies and skills in preparation for work and via forming a network of contacts and work opportunities to enhance career options.