London South Bank University

Module Guide

Human Nutrition

School of Applied Sciences

Level 5

Be what you want to become

Table of Contents

1. MODULE DETAILS

Module Title:	Human Nutrition
Module Level:	5
Module Reference Number:	
Credit Value:	1 Credits = 20 CAT points
Student Study Hours:	150
Contact Hours:	45
Private Study Hours:	105
Pre-requisite Learning:	120 credits at Level 4 including Nutrition, Health and Disease
Co-requisite Modules:	Public Health
Course(s):	Bioscience, Human Nutrition
Year and Semester	2019/20 Semester 1
Module Coordinator:	Dr Adam Cunliffe Cunliffa@lsbu.ac.uk 0207 815 7156 Borough Road
Room:	E226
Subject Area:	Food Science
External Examiner Appointed for this Module:	TBA

This guide is designed to help you structure your learning by providing an indicative structure and content for the module. It is a guide and not a definitive statement of what you will be taught. We will try to follow this published schedule as far as possible, but there may be some variation as the module develops and as we try to match the pace and content of our teaching to student needs.

2. SHORT DESCRIPTION

The science of human nutrition is a rapidly evolving discipline. This module will consolidate and expand on introductory concepts from level 4. The breadth of the subject will be explored including perspectives from physiology, cell biology, epidemiology and public health. Applied aspects of the area will be introduced and the human being as the central subject emphasised. Students will foster an appreciation of the multidisciplinary nature of nutrition and gain practical experience of assessing nutritional status.

3. AIMS OF THE MODULE

- To develop student understanding of the scope and application of nutritional science.
- To explore key aspects of micro and macronutrient metabolism and requirements according to activity level.
- To develop student understanding of the range and application of methods for assessing nutritional status in man.
- To allow students appreciate the complex nature of systems controlling food intake and energy balance.
- To examine the changing nature of nutritional requirements through the life cycle.

4. LEARNING OUTCOMES

Knowledge and Understanding

- Review the key aspects of macronutrient metabolism in humans.
- Develop a critical understanding of changing rates of substrate utilisation according to activity level and metabolic status.
- Demonstrate clear understanding of micronutrient deficiency syndromes and identify which populations are at risk of developing these syndromes.
- Demonstrate understanding of the diverse means of assessing human nutritional and health status including biochemical, dietary, functional, clinical and epidemiological perspectives.
- Explain the physiological mechanisms by which food and energy intake are controlled.
- Discuss the physiological, metabolic and sociological considerations that relate to governmental dietary recommendations for nutrient intake.
- Demonstrate the ability to interpret dietary records in the light of recommendations and individual characteristics.
- Evaluate the importance of behaviour in food selection and discuss the challenges of changing human behaviour in relation to food choice and consumption levels.

Intellectual Skills

The student will be expected to develop a range of skills to identify and understand the interrelations between nutritional biochemistry, physiology and behaviours. A range of skills will be required with respect to information gathering, evaluation and dissemination. Students will create a case history based on themselves and their peers which will involve interpreting, explaining and presenting health related data. Communication and presentation will also be formative skill development exercises embedded within the unit.

Practical Skills

- Use of information and communication technology – use of databases, governmental reports, internet, books and journals.
- Communication of scientific ideas in appropriate format.

-

Transferable Skills

- Oral and written communication skills through group discussion and the assessed coursework.
- Research skills through analysis of published work.
- Use of Information technology.
- Problem-solving.

5. ASSESSMENT OF THE MODULE

Assessment of the module will consist of two elements:

The pass mark for this module is 40%. Both elements must be completed to pass the module.
Assessment of the module will consist of two elements:

- In class test – Short Answer Questions (40%)
- MCQ examination (60%)

Please Note:
Any deferral/referral in any aspect of this module will be required to be undertaken at the next opportunity /next academic year.

AWARD OF MARKS

Most modules offered within the programme contain more than one type of assessment. Each type of assessment is called an element of assessment. You will normally be required to achieve a minimum threshold mark of 30% in each element of assessment as well as an overall aggregate, based on the weighting of the elements, of a minimum of 40%. Ensure that you prepare well for assessment; it is not good practice to merely achieve the minimum mark. A good performance in other modules may enable the Examination Board to decide in your favour on the basis of overall performance if you have performed less well in other areas.

As a general guide, marks are awarded for the following levels of achievement:

>70%	Comprehensive and competent answer. Well communicated. Evidence of additional reading and original thinking. Good analysis of the problem and logical solutions. Factually correct.
60 - 70 %	Overall competent and logical insight into the problem. Largely factually correct. Coverage not extensive but original thinking.
40 - 60%	Generally competent. Some factual errors. Overall understanding but lack of convincing answer
below 40%	A lack of understanding of the problem. Superficial answer. Factual errors. Poor communication skills.

ACADEMIC MISCONDUCT

Students are referred to the University's Student Handbook Section 10.12 Academic misconduct, which summarises Chapter 13 of the academic regulations. The full version of the regulations is available from the registry (situated in Technopark building).

Sections taken from 10.12 academic misconduct section of the student handbook:

Academic misconduct is defined as 'any attempt to gain unfair advantage in assessment, or to help another student gain unfair advantage, by deception or fraudulent means.'

Some examples of academic misconduct:

Assisting another student to gain unfair advantage – for example by allowing another student to copy your work, or use an electronic copy of your work.

Syndication: The submission of pieces of work, which are substantially similar by two or more students. This may apply within the same institution or in a number of institutions, either at the same time or different times.

Plagiarism: To 'take and use another person's thoughts, writings, inventions as one's own'. Representing another person's work as your own, without acknowledging the source. Examples of this are provided in your student handbook (10.12d).

Collusion: Representing as your own piece of work which two or more students have undertaken together, without permission to do so.

Bribery: Offering payment or other inducement to another person in order to gain improper advantage in assessment or to falsify the result of assessment.

Commission: Commissioning another person to undertake all or part of an assignment presented as your own work, or knowingly undertaking work for another student to present his or her own work.

6. FEEDBACK

Students will be given feedback from their in class test and exam following the exam board once marks have been ratified.

7. INTRODUCTION TO STUDYING THE MODULE

7.1 Overview of the Main Content

The nature and manifestations of nutritional adequacy, inadequacy; manifestations of over and undernutrition and the concept of normal weight malnutrition. The origin, application and critical evaluation of dietary recommendations for energy, macro and micronutrients – international comparisons. Approaches to assessing nutritional status of an individual/population by examination of epidemiological, clinical, anthropometric, dietary, functional and biochemical indices. Applications of nutritional status data at clinical and public health level. Links between nutritional biochemistry and metabolism, genotype and phenotype in relation to individual nutrients. Neurohormonal and behavioural aspects of food selection and intake control systems; role of the hypothalamus and recent neurochemical theories of food intake control. Substrate utilisation at varying rates of physical activity intensity; the concept of respiratory quotient/respiratory exchange ratio. Nutritional requirements and challenges in infancy, during growth and in older age.

7.2 Overview of Types of Classes

A series of key lectures and tutorials will form the main teaching methods in this unit.

Students should attend all lectures to successfully pass the module. 80% attendance is required to pass the module. Students must be punctual. No student will be allowed to join the class after the first 15 minutes (according to Department of Applied Science Policy).

7.3 Importance of Student Self-Managed Learning Time

It is important for you to plan your work schedule in advance (use this module guide to help). Use time efficiently. Make effective notes (Use key words, flow charts, diagrams and personal short-hand). Review material (Re-read lecture notes following each session; this will aid learning). Carry out directed reading. Remember, you must make an effort! Lectures are there for overview and guidelines. Learning must come from your own reading. Private study: you are expected to contribute to your learning by participating in the designated private study time associated with this module. You will not pass the module by simply attending sessions. Ask for help (don't be afraid to ask!!).

7.4 Employability

An understanding of Human Nutrition will be useful when seeking employment within the health, food and education sectors.

8. THE PROGRAMME OF TEACHING, LEARNING AND ASSESSMENT

Semester 1

Thursdays: 11am – 1pm

Room: Details via Moodle Site/Timetable

The weekly programme is outlined below. You need to **check for any room changes** on the module blackboard site, or on the door to the room, if an extreme emergency. Please make **every effort** to turn up on time so that the class is not disrupted. **Please note: 80% attendance is required to pass the module.** All mobiles **to be silent** during class contact time!

Date	Week	Lecture Topic	Revision/Tutorials
26th Sept	1	Introduction to Module Diet-disease relationships I	
3rd Oct	2	Diet-disease relationships II	
10th Oct	3	Review of Bioenergetics	
17th Oct	4	Dietary recommendations/DRV's	
24th Oct	5	Micronutrient deficiency disorders	
31st Oct	6	Nutritional Assessment I	
7th Nov	7	Nutritional Assessment II	
14th Nov	8	**In Class Test (Compulsory Attendance)**	
21nd Nov	9	Nutrition and physical activity (AC)	
28th Nov	10	Physiological control of food intake (AC)	
5th Dec	11	Understanding nutrition research (AC)	
12th Dec	12	Reading Week	
9th Jan	13	Module Consolidation and Revision	

9. STUDENT EVALUATION

Overall students enjoyed the module and the variety of topics covered. Students requested more tutorials to aid learning week by week rather than just a revision session at the end of the module.

10. LEARNING RESOURCES

Core reading:

- Human Nutrition, 13th ed. Geissler and Powers (2017), Oxford University Press
- McAdrdle WD, Katch FI, Katch VL (2010) Exercise Physiology: Nutrition, Energy, and Human Performance. 7th Edition. Lippincott Williams & Wilkins. London.Maurice E. Shils, James A. Olson, Moshe Shike (Editor) *Modern Nutrition in Health and Disease* (Volumes One and Two)Lea & Febiger.

Optional reading:

- Department of Health (1991) *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom.* Report on Health and Social Subjects No. 41. The Stationery Office: London.
- Food Standards Agency (2002/12) *Food Portion Sizes*, 3rd edition/4th edition. The Stationery Office: London.
- Food Standards Agency (2002) *McCance and Widdowson's The Composition of Foods. Sixth summary edition.* Royal Society of Chemistry: Cambridge.

Useful web addresses

British Nutrition Society	http://www.nutritionsociety.org/
British Nutrition Foundation	http://www.nutrition.org.uk/

Search Engines

Google (Scholar)	http://scholar.google.co.uk/
PubMed	http://www.ncbi.nlm.nih.gov/pubmed/

NOTES