

THE UNIVERSITY OF HONG KONG
HKU SPACE Community College

Associate Degree Programmes 2022-23
Course Document

Course Title: Food and Nutrition Basics

Course Code:	C	C	S	T	4	0	1	0
QF Level:	4							
Contact Hours:	51 Hours							

Aims and Objective

This course is designed to provide students with a background in biology with an introduction to the basic concepts of key areas of food science, technology and nutrition. Starting with an examination of food composition and function, the relations between nutrition, metabolism and health are explored before finishing with a brief coverage of food production, processing, packaging and preservation.

Intended Learning Outcomes of the Course

On completion of the course, students should be able to

- ILO1. describe the characteristics of food components;
- ILO2. evaluate nutritional deficiencies;
- ILO3. distinguish problems in digestion;
- ILO4. interpret lifestyle health problems;
- ILO5. explain the technology of food processing.

Syllabus

1. What is food? Where does food come from?
2. Components of foods- Carbohydrate, protein, fat, vitamins and minerals and water.
3. Energy yielding nutrients- types, sources, functions and requirement of carbohydrates, proteins and fats. Digestibility, breakdown and uptake.
4. Energy needs and metabolism, energy balance, weight control and obesity.
5. The role of vitamins and minerals- fat soluble vitamins; water soluble vitamins; minerals and trace elements.
6. Nutrition and deficiency, Diet and cardiovascular disease, diabetes, osteoporosis and cancer.
7. Dietary requirements, planning and public health.
8. Food types Cereal products, Noodles, Baking, Meat & fish, Dairy products, Fermented foods.
9. Food processing techniques, canning, freezing, drying, extrusion. Food packaging and storage. Food product development, consumer acceptance and sensory evaluation.

Assessment

Description	Weighting
Laboratory Reports	20%
Assignments	10%
Class Test	20%
Presentation	10%
Final Test	40%

Pre-requisite(s)

1. Taken Advanced level or AS level Biology or equivalent; or
2. Taken or taking CCST3005 Introductory Basic Biology; or
3. Level 2 or above in HKDSE Biology; or
4. Level 3 or above in HKDSE Combined Science (Biology)

Required and Recommended Reading**Recommended Reading:**

1. Mader, S.S., & Windelspecht, M., Biology, 13th Edition, McGraw-Hill 2019.
2. Barasi M.E., Human Nutrition, 2nd Edition, Arnold, London, 2003.
3. Wahlqvist, M.L., Food & Nutrition , 3rd Edition, Allen & Unwin 2011.
4. Whitney & Rolfes, Understanding Nutrition, 15th Edition, Wordsworth, 2019.
5. Vaclavik & Christian, Essentials of Food Science, 3rd Edition 2008.

09.01.2023