



CARIBBEAN EXAMINATIONS COUNCIL

**Caribbean Advanced Proficiency Examinations
CAPE[®]**

FOOD AND NUTRITION SYLLABUS

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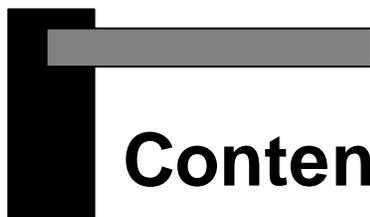
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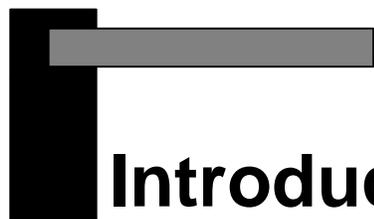
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Introduction

The Caribbean Advanced Proficiency Examination (CAPE) is designed to provide certification of the academic, vocational and technical achievement of students in the Caribbean who, having completed a minimum of five years of secondary education, wish to further their studies. The examinations address the skills and knowledge acquired by students under a flexible and articulated system where subjects are organised in 1-Unit or 2-Unit courses with each Unit containing three Modules. Subjects examined under CAPE may be studied concurrently or singly.

The Caribbean Examinations Council offers three types of certification. The first is the award of a certificate showing each CAPE Unit completed. The second is the CAPE diploma, awarded to candidates who have satisfactorily completed at least six Units, including Caribbean Studies. The third is the CAPE Associate Degree, awarded for the satisfactory completion of a prescribed cluster of seven CAPE Units including Caribbean Studies and Communication Studies. For the CAPE diploma and the CAPE Associate Degree, candidates must complete the cluster of required Units within a maximum period of five years.

Recognized educational institutions presenting candidates for CAPE Associate Degree in one of the nine categories must, on registering these candidates at the start of the qualifying year, have them confirm in the required form, the Associate Degree they wish to be awarded. Candidates will not be awarded any possible alternatives for which they did not apply.



Food and Nutrition Syllabus

◆ RATIONALE

In the light of increasing nutrition-related illnesses in the world, it is necessary to find new ways to empower individuals and communities to exercise control over their health. Proper nutrition practices hold the key to the prevention and treatment of the chronic degenerative diseases that affect families globally.

It is now well established that the achievement and maintenance of optimal physical and mental health, and the prevention of disease, are integral to the economic and social development of the people of the Caribbean Region. The integration of preventive and therapeutic nutrition into contemporary health care and food production and service is pivotal to this process.

Food and Nutrition involves the study of food and its relation to health. The primary focus of the subject is the raising of standards in food science, food preparation and service.

This syllabus in Food and Nutrition is designed to prepare students for employment in the rapidly growing hospitality service industry. The syllabus also seeks to change attitudes and to improve the health status of both the individual and the community. In addition, the syllabus seeks to provide additional opportunity for access to, and advanced standing in existing tertiary level education programmes. Students will be exposed to the main aspects of food science, including safety practices, standards, purchasing, planning, preparing, storing and serving.

The syllabus also contributes to the development of selected attributes from the CARICOM Ideal Person document as articulated by the CARICOM Heads of Government. This person is one who demonstrates emotional security with a high level of self-confidence and self-esteem, is aware of the importance of living in harmony with the environment and nurtures its development in the economic and entrepreneurial spheres in all other areas of life (CARICOM Education Strategy, 2000).

This holistic development of students aligns with selected competencies advocated in the UNESCO Pillars of learning. These are learning to be, learning to do, and learning to transform one's self and society.

Students who complete this programme in Food and Nutrition will be beneficiaries of knowledge and skills that would help them to secure good health and well-being for themselves and their families. Such knowledge and skills, once acquired, would allow graduates to enter the world of work and be better prepared to pursue a wide range of contemporary careers related to diet, fitness and well-being.

Analysis and Interpretation

The ability to:

- identify and recognise the component parts of a whole and interpret the relationships between those parts;
- identify causal factors and show how they interact with each other;
- infer, predict and draw conclusions;
- make necessary and accurate calculations and recognise the limitations and assumptions of data.

Synthesis

The ability to:

- combine component parts to form a new meaningful whole;
- make predictions and solve problems.

Evaluation

The ability to make reasoned judgements and recommendations based on the value of ideas and information and their implications.

Practical and Experimental Skills (PXS)

Observation/Recording/Reporting

The ability to:

- recognise, identify and interpret signs and symptoms of nutrition related conditions;
- present a written report, drawing or other graphical representation, which is clear, concise, accurate and relevant to an investigation, including the use of scientific and quantitative treatment if applicable;
- make written presentations;
- record and report unexpected results;
- record accurately microscopic and field observations;
- provide a bibliography in an appropriate format to accompany written reports.

Manipulation/Measurement

The ability to:

- handle tools and equipment with care;
- assemble and use simple apparatus and measuring instruments;
- handle foods with care.

Planning/Designing

The ability to:

- recognise the problem and formulate valid hypotheses;
- choose appropriate experimental research methods and sampling techniques;
- choose appropriate practical equipment and instruments for data collection;
- plan and execute procedures in a logical sequence within the time allotted;
- modify experimental methods after initial or unexpected outcomes.

◆ PRE-REQUISITES OF THE SYLLABUS

Any person with a good grasp of the Caribbean Secondary Education Certificate (CSEC) Food and Nutrition, or Chemistry, or Biology, or Integrated Science syllabuses or the equivalent, should be able to pursue the course of study defined by this syllabus. However, successful participation in the course of study will also depend on possession of good verbal and written communication skills.

◆ STRUCTURE OF THE SYLLABUS

The syllabus is divided into two Units. Each Unit comprises three Modules.

Unit 1, FOOD, NUTRITION and HEALTH, contains three Modules, each requiring 50 hours. Total time is expected to be 150 hours.

Module 1	-	Principles of Nutrition and Health
Module 2	-	Food Selection and Meal Planning
Module 3	-	Food Preparation and Service: Principles and Methods

Unit 2, FOOD TECHNOLOGY, contains three Modules, each requiring 50 hours. Total time is expected to be 150 hours.

Module 1	-	Caribbean Foodways and Food Systems
Module 2	-	Food Science and Technology
Module 3	-	Food Preparation and Service: Large Quantity and Commercial

◆ UNIT 1 : FOOD, NUTRITION AND HEALTH

MODULE 1: PRINCIPLES OF NUTRITION AND HEALTH

GENERAL OBJECTIVES

On completion of this Module, students should:

1. appreciate the importance of early eating habits on the shaping of later eating behaviour and health status;
2. understand how food nourishes the body;
3. develop skills to assess and apply nutrition standards and guidelines for achieving optimum human nutrition and health;
4. develop awareness of current nutritional concerns in the Caribbean, and the appropriate approaches to prevention, control and management at the individual and community levels.

SPECIFIC OBJECTIVES

Students should be able to:

1. distinguish among satiety, hunger and appetite;
2. explain how various factors affect eating behaviour;
3. classify foods on the basis of major dietary components;
4. evaluate the dietary sources, roles and functions of key nutrients;
5. evaluate the role of digestion, absorption and metabolism of nutrients in human health;
6. calculate food and energy requirements based on recommendations of Caribbean Recommended Dietary Allowances (RDA) for nutrient requirements and physical activity levels;
7. compare food needs of individuals at different stages of the life cycle;
8. evaluate the importance of mixing a variety of foods in the diet to achieve nutritional balance at the lowest possible cost;
9. explain the importance of balance between food or energy intake and energy expenditure;

UNIT 1

MODULE 1: PRINCIPLES OF NUTRITION AND HEALTH (cont'd)

10. describe the benefits of breastfeeding and appropriate complementary feeding from the perspectives of the child, mother and society;
11. assess criteria for determining nutritional status throughout the life cycle;
12. describe the relationship between growth and development, and adequate food intake;
13. describe the nutrition-related diseases that constitute health problems in the region;
14. describe the various approaches to prevention, control and management of nutrition-related diseases;
15. analyse the synergistic relationship between malnutrition and infections, and develop simple guidelines for prevention;
16. use a growth chart as a tool for monitoring the health and nutritional status of young children;
17. determine follow-up action needed for improvement of children's health and nutrition at the individual, family and community level;
18. explain the role that diet and other life style practices play in the management and prevention of adult chronic diseases, including human immunodeficiency virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS);
19. identify reliable sources of nutrition information.

CONTENT

1. **Eating Behaviour**
 - (i) Definition of satiety, hunger and appetite.
 - (ii) Physiological, psychological, biochemical factors.
2. **How Food Nourishes the Body**
 - (i) Physical and chemical properties: classification; functions; interdependence and metabolism in the human body.
 - (ii) Food as a source of nutrients.

UNIT 1

MODULE 1: PRINCIPLES OF NUTRITION AND HEALTH (cont'd)

3. Dietary Guides and Nutrition Standards

- (i) Definition and uses of Recommended Dietary Allowances (RDA).
- (ii) Classification of foods into food groups: Caribbean food groups; exchange lists; substitutions.
- (iii) The Multi-Mix Principle for combining foods into a nutritionally balanced diet.
- (iv) Use of Food Composition Tables.

4. Food and Nutrient Requirements

- (i) Factors influencing food and nutrient requirements: growth, physical activity levels, pregnancy, and chronic diseases.
- (ii) Nutritional outcome in respect of different levels of food or nutrient intake with specific reference to energy and nutrient balance, and physical activity.

5. Feeding the Child During the First Year of Life

- (i) Breastfeeding: factors that contribute to successful breastfeeding.
- (ii) Benefits to child and mother.
- (iii) Myths and misconceptions.
- (iv) Complementary feeding.
- (v) Factors that influence nutritional status.
- (vi) Strategies for the promotion and protection of breast feeding.

6. Nutritional Status of Children

- (i) Anthropometric measurements and assessment: nutritional status indicators.
- (ii) Plotting weight at different ages on the growth chart.

UNIT 1

MODULE 1: PRINCIPLES OF NUTRITION AND HEALTH (cont'd)

- (iii) Use of the growth curve to interpret nutritional status.
- (iv) Methods of improving nutritional status of children at the individual, family and community levels.

7. Nutrition-Related Disorders

- (i) Deficiency diseases which are health problems common in the region.
- (ii) Synergistic relationship between diarrhoea and under-nutrition.
- (iii) Adult chronic diseases common in the Caribbean: diabetes; obesity; hypertension; heart disease; certain cancers.
- (v) Factors contributing to the life-style diseases.
- (vi) Approaches to prevention, control and management of nutrition-related disorders.

8. Reliable Sources of Nutrition Information

- (i) Identification of reliable sources.
- (ii) Agencies involved in nutrition-related research or education.
- (iii) Accessing and using scientifically reliable sources: scientifically reliable websites; scientific journals; textbooks.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Encourage students to attend lectures and demonstrations on topics related to nutrition and health.
2. Assign students to participate in class discussions on issues related to nutrition and health.
3. Encourage students to become familiar with issues of nutrition and health through case studies.
4. Assign students to participate in group work and presentations on issues related to nutrition and health.

UNIT 1

MODULE 1: PRINCIPLES OF NUTRITION AND HEALTH (cont'd)

5. Assign practical work for students to apply their skills and technique.
6. Assign students to conduct laboratory exercises.
7. Engage students in conducting surveys and interviews.
8. Encourage students to practise report writing.
9. Engage students in panel discussions and seminars.
10. Assign students to participate in field trips.

RESOURCES

American Institute of Nutrition	<i>Journal of Nutrition</i> , Dietary Assessment Resource Manual, Volume 124, Supplement 1994.
Caribbean Food and Nutrition Institute (CFNI), Jamaica	<i>Food Composition Tables for Use in the English-Speaking Caribbean</i> , 1995.
Caribbean Food and Nutrition Institute (CFNI), Jamaica	<i>Food Composition Tables for Use in the English-Speaking Caribbean</i> , Supplement 2000.
Caribbean Food and Nutrition Institute (CFNI), Jamaica	<i>Recommended Dietary Allowances for the Caribbean</i> , 1994.
Sinah, P.	<i>Nutrition Made Simple</i> , Jamaica: CFNI, 1994.
Whitney, E., Hamilton, E., and Rolfes, S.	<i>Understanding Nutrition</i> , St. Paul, MN: West Publishing Company, 1990.

UNIT 1

MODULE 2: FOOD SELECTION AND MEAL PLANNING

GENERAL OBJECTIVES

On completion of this Module, students should:

1. develop the skills to plan and prepare nutritious meals for all stages of the life cycle and for various occasions;
2. develop the skills to plan and prepare nutritious meals while maintaining the safety and aesthetic value of food;
3. understand the role of protection agencies and governmental organisations in maintaining acceptable food standards.

SPECIFIC OBJECTIVES

Students should be able to:

1. differentiate among various types of meals and meal patterns;
2. plan nutritionally balanced meals using a variety of foods, including convenience foods;
3. explain why excessive consumption of some nutrients can be dangerous;
4. describe the chief nutrients provided by each category of the six food groups;
5. evaluate the role of chemically and genetically engineered foods in the diet;
6. justify criteria for planning meals with food appeal and palatability;
7. plan meals to satisfy different dietary requirements for persons at different stages of the life cycle;
8. evaluate product quality associated with storage of food;
9. practise and promote proper handling and storage of food as regulated by legislation;
10. assess the role of nutrition information in food labelling;
11. show the relationship between food safety and sanitation;
12. explain the principles underlying nutrient conservation.

UNIT 1
MODULE 2: FOOD SELECTION AND MEAL PLANNING (cont'd)

CONTENT

1. Meal Plans and Meal Patterns

- (i) Types of meal:
 - (a) breakfast;
 - (b) lunch;
 - (c) dinner;
 - (d) supper;
 - (e) snacks;
 - (f) special occasions, for example, weddings and anniversaries.
- (ii) Meal courses:
 - (a) two-course;
 - (b) three-course.
- (iii) Menu formats and construction.

2. Food Guide Systems Available for Meal Planning

- (i) Six food groups (Caribbean Food Guide; Canadian Food Guide; USA Food Pyramid; British Food Guide; Recommended Nutrient Intake (RNI); Dietary Value Intake; Dietary Reference Value).
- (ii) Nutritive values as a basis for classification.
- (iii) Food Exchange lists.
- (iv) Recommended Daily Allowances (RDA).
- (v) Dietary guidelines.

3. Major nutrients in each category of the six food groups.

UNIT 1

MODULE 2: FOOD SELECTION AND MEAL PLANNING (cont'd)

4. Chemically and Genetically Engineered Foods

- (i) Functional foods and genetically engineered foods.
- (ii) Fat replacers.
- (iii) Sugar and salt substitutes.

5. Meal Planning

- (i) Factors to be considered when planning the regular balanced diet: adequacy, balance caloric control, moderation, variety and aesthetics.
- (ii) Meals for persons at all stages of the life cycle.
- (iii) Modification of the regular diet to suit therapeutic and other needs.
- (iv) Vegetarian diets.
- (v) Convenience Foods.
- (vi) Relationship between excessive consumption of nutrients and health.
- (vii) Nutrient supplementation, food fortification.

6. Food Labelling

- (i) Required information and format.
- (ii) Optional nutritional information.
- (iii) Guidelines for use of labelling when investigating nutritional value of foods.

7. Storage and Handling of Food

- (i) Causes of food poisoning:
 - (a) bacteria;
 - (b) moulds;

UNIT 1

MODULE 2: FOOD SELECTION AND MEAL PLANNING (cont'd)

- (c) chemical contaminants.
 - (ii) Procedures for ensuring safety of food:
 - (a) cooking and serving temperatures, degree of doneness, holding time and temperatures;
 - (b) cross contamination in food preparation;
 - (c) thawing and cooling procedures;
 - (d) governmental efforts to promote food safety;
 - (e) role of protection agencies.
8. **Nutrient Conservation**
- (i) Causes of loss of nutrients associated with food preparation and storage-solution, enzymes, temperatures, exposure to air, trace minerals, lights, micro-organisms.
 - (ii) Methods of conserving nutritive value of a variety of dry and frozen foods during storage.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Engage students in class discussions.
2. Assign students to conduct research (for example, hotels) into practices of institutions dealing with food selection and meal planning.
3. Use case studies to develop skills in critical thinking and problem solving in issues related to food selection and meal planning.
4. Assign students to participate in field trips to institutions dealing with food selection and meal planning.
5. Assign students to project work involving selecting foods and planning meals for a variety of occasions.
6. Encourage students to simulate interview sessions.

UNIT 1

MODULE 2: FOOD SELECTION AND MEAL PLANNING (cont'd)

7. Engage students in experimental work on meal planning.
8. Assign students to participate in panel discussions on food selection and meal planning.
9. Invite resource persons to engage students in discussions related to food selection and meal planning.

RESOURCES

Caribbean Food and Nutrition
Institute (CFNI), Jamaica

Meal Planning for Persons with Diabetes, CFNI, 1994.

Whitney, E. Hamilton, E. and Rolfes, S.

Understanding Nutrition, St. Paul, MN: West Publishing
Company, 1990.

UNIT 1

MODULE 3: FOOD PREPARATION AND SERVICE: PRINCIPLES AND METHODS

GENERAL OBJECTIVES

On completion of this Module, students should:

1. develop the knowledge and skills related to food preparation and service;
2. develop a positive attitude towards food preparation and service;
3. develop the technical and management skills necessary for a variety of careers in the food service industry.

SPECIFIC OBJECTIVES

Students should be able to:

1. organise food preparation areas;
2. select, use and care industrial and small equipment and tools used in food preparation and service;
3. determine the potential danger areas of a kitchen and apply safety measures;
4. administer first aid procedures in a food preparation area;
5. explain the scientific principles underlying food preparation;
6. demonstrate appropriate and safe knife skills;
7. prepare foods using various methods and principles of food preparation;
8. demonstrate skills in the aesthetic presentation and service of foods;
9. create appropriate garnishes using locally grown foods;
10. adapt basic recipes to accommodate various situations;
11. use principles of sensory evaluation in product development.

UNIT 1

MODULE 3: FOOD PREPARATION AND SERVICE: PRINCIPLES AND METHODS (cont'd)

CONTENT

1. Kitchen Planning

- (i) Organisation of food preparation area for efficient work, production flow, work design.
- (ii) Selection, use and care of small and industrial equipment and tools.

2. Kitchen Safety and First Aid

- (i) Safety precautions and measures in the kitchen.
- (ii) First aid principles and practice.
- (iii) Use of fire extinguishers.
- (iv) Occupational health and safety.

3. Scientific Principles Underlying Food Preparation Methods

- (i) Effect of heat on various foods: meats; vegetables; fruits; poultry; eggs.
- (ii) Heat transfer methods and application - dry, moist and combination.
- (iii) Principles involved in different methods of cooking.
- (iv) Effects of heat on nutrients found in foods.
- (v) Food preparation methods to retain nutritive properties, colour and flavour.
- (vi) Economical use of food, equipment and fuel.

4. Knife Skills

- (i) Types of knives in food preparation.
- (ii) Parts of a knife.
- (iii) Knife skills or usage.

UNIT 1

MODULE 3: FOOD PREPARATION AND SERVICE: PRINCIPLES AND METHODS (cont'd)

5. Food Preparation

- (i) Meat, fish, poultry and dairy products - cuts, market forms, method of preparation and service.
- (ii) Stock, sauces, soups - types, ingredients, principles of making, thickening agents, procedures for preparation and service.
- (iii) Baked products - ingredients, uses, baking techniques, process, procedures for preparation and service.
- (iv) Vegetables and fruits - classification, preparation, guidelines for cooking and serving.
- (v) Pasta, grains, (rice, corn), ground provision - types, purchasing and storing, guidelines for cooking and serving.

6. Garnishes

- (i) Types of garnishing.
- (ii) Selection of food items appropriate for garnishes.
- (iii) Making and using garnishes.
- (iv) Basic garnishing skills.

7. Basic Food Service

- (i) Appointments needed for Food Service.
- (ii) Basic table service.
- (iii) Principles of serving food.
- (iv) Suitable temperature for various foods.

UNIT 1

MODULE 3: FOOD PREPARATION AND SERVICE: PRINCIPLES AND METHODS (cont'd)

8. Recipe Modification and Conversion

- (i) Conversion of standardised recipes based on number of persons to be served.
- (ii) Modification of basic recipes to promote healthful food choices.
- (iii) Comparison of nutrient content of original and modified products using Food Composition Tables.

9. Sensory Evaluation of Food Products

- (i) Organoleptic factors: aroma, taste, colour, texture, shape.
- (ii) Sensory appeal.
- (iii) Market feasibility.

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

- 1. Encourage students to attend lectures and demonstrations on issues related to food preparation and service.
- 2. Engage students in class discussions.
- 3. Assign students to conduct research on issues related to food preparation and service.
- 4. Encourage students to develop report writing skills.
- 5. Assign students to practical laboratory sessions.
- 6. Assign students to compile a scrapbook of original recipes.
- 7. Assign students to participate in panel discussions on issues related to food preparation and service.
- 8. Invite resource persons to engage students in discussion on issues related to food preparation and service.
- 9. Conduct field trips to institutions engaged in food preparation and services.
- 10. Organise work attachments for students.

UNIT 1

MODULE 3: FOOD PREPARATION AND SERVICE: PRINCIPLES AND METHODS (cont'd)

RESOURCES

- Chesser, J. W. *The Art and Science of Culinary Preparation*, Florida: The Educational Institute of the American Culinary Federation, 1992.
- Gisslen, W. *Professional Cooking*, New York: John Wiley and Sons, 1999.
- Mizier, D., Porter, N., and Sonnier, B. *Food Preparation for the Professional*, New York: John Wiley and Sons, 1987.
- Whitney, E., Hamilton, E., and Rolfes, S. *Understanding Nutrition*, St. Paul, MN: West Publishing Company, 1990.

◆ UNIT 2: FOOD TECHNOLOGY

MODULE 1: CARIBBEAN FOODWAYS AND FOOD SYSTEMS

GENERAL OBJECTIVES

On completion of this Module, students should:

1. develop an awareness and appreciation for foods grown locally and regionally;
2. develop an understanding of Caribbean food systems and the impact of these systems on Food and Nutrition security.

SPECIFIC OBJECTIVES

Students should be able to:

1. describe the factors that influence food choices and practices;
2. determine the socio-economic and cultural influences on food patterns in the Caribbean;
3. identify a variety of tools and equipment used in preparing indigenous Caribbean dishes;
4. assess the nutritional value of indigenous foods and dishes and the impact on health;
5. develop a variety of uniquely Caribbean recipes using foods that are readily available in the Caribbean;
6. evaluate Caribbean food systems and the impact of these systems on household food security;
7. evaluate food hygiene and sanitation standards and procedures in Caribbean food systems;
8. describe the standards and procedures for regulating and monitoring foods and food establishments in the Caribbean;
9. describe the factors to be considered in maintaining adequate and safe food supply at the household and community levels before, during and after natural disasters;
10. design simple plans for ensuring that approved standards of Food Preparation, Nutrition and Health are maintained in the feeding of families;
11. evaluate cultural beliefs and practices that impact on nutritional quality and status.

UNIT 2

MODULE 1: CARIBBEAN FOODWAYS AND FOOD SYSTEMS (cont'd)

CONTENT

1. **Factors influencing food choices and practices**
 - (i) Individual likes and dislikes.
 - (ii) Values and beliefs; religious principles and cultural influences.
 - (iii) Agricultural practices.
 - (iv) Food availability and accessibility.
 - (v) Education, fads and fallacies.
 - (vi) Impact of globalization, including trade, media, advertising, migration and tourism.

2. **Factors influencing Caribbean Food Patterns**
 - (i) History of foods.
 - (ii) Origin of foods: terminology, method of preparation.
 - (iii) Cultural food-related customs and practices.

3. **Indigenous Caribbean Foods and Dishes**
 - (i) Identification of recipes used in various Caribbean countries.
 - (ii) Nutritional assessment and modification of these recipes.
 - (iii) Preparation, service and presentation (using Caribbean themes) of indigenous dishes.
 - (iv) Development and promotion of recipes unique to the Caribbean.

4. **Tools and Equipment Used in Cooking Indigenous Caribbean Dishes**
 - (i) Identification origin and usage of tools and equipment, for example, coal-pot, mortar and pestle, tawah, cocoa mill.

UNIT 2

MODULE 1: CARIBBEAN FOODWAYS AND FOOD SYSTEMS (cont'd)

- (ii) Advantages and disadvantages of:
 - (a) energy use and fuel conservation;
 - (b) environmental and other issues relating to the preparation of indigenous dishes.

5. Food Systems in the Caribbean

- (i) Definition of “food system”.
- (ii) Food Security:
 - (a) Availability of foods:
 - production: growing, rearing, manufacturing, ethical considerations, Genetically Modified Foods, standards relating to additives and pesticide residue;
 - import and export, labeling, standards, expiry dates;
 - distribution networks, marketing, packaging, sizes, labeling standards.
 - (b) Accessibility
 - income and pricing policy;
 - consumer education;
 - infrastructure, markets, transportation;
 - health standards and disease patterns.

6. Food Hygiene Sanitation

- (i) Regulating the standards governing the sale of foods (Education and Certification):
 - (a) Irradiation, fresh milk, meat and poultry; nutrients level in flour, iodine in salt, bottled water (level of additives) food handlers permit, storage of foods.
- (ii) Safe storage of food and disposal of waste.
- (iii) Impact on Nutrition and Health: conservation of nutritive value.

UNIT 2

MODULE 1: CARIBBEAN FOODWAYS AND FOOD SYSTEMS (cont'd)

- (iv) Water supply: regularity; quality.
- (v) The Hazard Analysis Critical Control Points (HACCP) approach to food safety.

7. Food and Nutrition Standards

- (i) Identification of regulatory agencies, for example, Bureau of Standards, Ministry of Health.
- (ii) Food and nutrition standards.
- (iii) Legislation.
- (iv) Monitoring.
- (v) Consumer rights and protection.

8. Factors to be considered before, during and after disasters

- (i) Procurement and preparation of adequate and appropriate foods for all, including vulnerable groups.
- (ii) Labeling and storage of food.
- (iii) Identification of vulnerable groups.
- (iv) Ensuring the safety of the food supply.
- (v) Calculating daily food rations.
- (vi) Planning of the distribution of food.
- (vii) Monitoring of left over foods for quality.
- (viii) Identification of Government and non-Government agencies involved in feeding.

UNIT 2

MODULE 1: CARIBBEAN FOODWAYS AND FOOD SYSTEMS (cont'd)

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the teaching and learning activities listed below.

1. Collect and analyse information on Caribbean food practices from a variety of sources, including print and electronic media sources.
2. Collect and document information about historical and cultural aspects of food.
3. Invite professionals, for example, historians, sociologists, archaeologists, archivists, curators, anthropologists to interact with class on Caribbean foodways and food systems.
4. Conduct visits to hotels and restaurants offering local cuisine to observe equipment and practices.
5. Conduct field trips to archives, museums, communities of indigenous peoples, senior citizens, archaeological sites, where available, to observe indigenous dishes and equipment and collect information. These can form the basis of class discussions resulting from reports and group activities.
6. Assign students to undertake experimental work in developing recipes.
7. Encourage group reporting on findings from research activities.
8. Assign students to demonstrate techniques, tools and equipment used in food preparation.
9. Employ the use of video presentations on the cultural practices in the region.
10. Conduct visits to agencies responsible for regulating sanitation and food and drug standards and policies relating to consumer reports and disaster preparedness.
11. Conduct field trips to farms, food production and manufacturing factories and agents, street markets, supermarkets to observe factors that impact on food and nutrition security.
12. Assign students to collect and document information on historical and cultural aspects of food.

RESOURCE

Campbell, V.

Caribbean Foodways, Jamaica: Caribbean Food and Nutrition Institute, 1988.

UNIT 2

MODULE 2: FOOD SCIENCE AND TECHNOLOGY

GENERAL OBJECTIVES

On completion of this Module, students should:

1. understand the scientific principles underlying the transmission of diseases through food and the prevention of these diseases;
2. be aware of the impact of advancements in technology on the availability of food, and the consequent social, economic and environmental effects;
3. develop the knowledge, skills and attitudes necessary for the safe preparation and preservation of foods;
4. be aware of acceptable standards for fresh and produced foods.

SPECIFIC OBJECTIVES

Students should be able to:

1. describe the physical and chemical properties of food constituents;
2. describe the principles and procedures of food preparation and preservation;
3. describe the principles involved in the processing of foods from field to consumer;
4. explain the positive and negative aspects of the use of biotechnology and food additives;
5. describe the process used to improve the nutrient content of food;
6. explain the purpose and use of the information required on food labels;
7. assess the appropriateness and effectiveness of various food packaging materials;
8. evaluate activities of protection agencies in ensuring quality products and the safety of the public food supply;
9. evaluate various methods of food preservation;
10. develop a pricing system for home and commercially processed foods.

UNIT 2

MODULE 2: FOOD SCIENCE AND TECHNOLOGY (cont'd)

CONTENT

1. Constituents of Food

- (i) Carbohydrates, proteins, fats, vitamins, minerals, water, phytochemicals.
- (ii) Changes in physical and chemical properties during food preparation and processing.

2. Food Additives

- (i) Definition and classification: types; active ingredients; purpose.
- (ii) Biotechnology: engineered foods; genetically modified organisms; nutraceuticals, functional foods.
- (iii) Nutrient improvement of food: enrichment; fortification; supplementation.
- (iv) Standards for regulating the use of food additives: the use of food additives, bio-safety.

3. Food Processing and Preservation

- (i) Reasons for processing and preservation of food.
- (ii) Principles of processing various categories of foods: animal foods, cereals; fruits; vegetables: harvesting, transportation, cleaning, preparation: heat treatment, moisture treatment and packaging.
- (iii) (a) Methods of food preservation: chemical, heat, acids, sugar and salt, freeze drying, dehydration, smoking fermentation, irradiation;
- (b) Advantages and disadvantages of food preservation:
 - the role of micro-organisms (bacteria, yeast, moulds) in food processing and preservation;
 - quality standards for a safe food product.

UNIT 2

MODULE 2: FOOD SCIENCE AND TECHNOLOGY (cont'd)

4. Food and Nutrition Labelling

- (i) Standard labelling information and format.
- (ii) Storage use and care instructions.
- (iii) Nutrition Facts Panel.
- (iv) Standards and regulations: ingredients, health claims, expiry date.
- (v) The use of food labeling in consumer education.

5. Food Merchandising

- (i) Packaging:
 - (a) materials: appropriateness of packaging materials for a variety of foods and method of processing, for example, metal, glass, flexibility pouches, plastic, microwavable containers and edible films;
 - (b) criteria for effective packaging:
 - non toxic;
 - barriers to moisture loss, oxidation and microbial contamination;
 - ease of opening;
 - ease of resealing;
 - environmentally-friendly;
 - pricing: factors contributing to costs.

UNIT 2

MODULE 2: FOOD SCIENCE AND TECHNOLOGY (cont'd)

Suggested Teaching and Learning Activities

To facilitate students' attainment of the objectives of this Module, teachers are advised to engage students in the following teaching and learning activities.

1. Assign class to conduct research and experimentation on food processing practices.
2. Encourage class discussion and debates.
3. Conduct field trips to food manufacturing and processing companies and cottage industries to observe manufacturing processes.
4. Assign class to view video films on activities of micro-organisms and food processing.
5. Conduct interactive sessions on food preservation techniques.
6. Encourage practical applications of techniques by students.
7. Encourage group work and presentations.
8. Allow students to conduct interviews with food protection agencies or institutions and food manufacturers.

RESOURCE

Desrosier, N.W. and Desrosier, J.N.

The Technology of Food Preservation, Westport: Connecticut Publishing Company, 1997.

UNIT 2

MODULE 3: FOOD PREPARATION AND SERVICE: LARGE QUANTITY AND COMMERCIAL

GENERAL OBJECTIVES

On completion of this Module, students should:

1. develop knowledge and skills necessary to prepare, cook and present meals in large quantity and with appropriate quality control;
2. develop an appreciation for the aesthetic and economic value of preparing, cooking and serving wholesome food in a safe environment;
3. promote nutritive benefit as the focal point in planning meals and preparing food in large quantities;
4. develop an appreciation of the uniqueness of traditional Caribbean cuisine.

SPECIFIC OBJECTIVES

Students should be able to:

1. apply the Hazard Analysis Critical Control Point (HACCP) approach to safety in handling large quantities of food;
2. apply the Multi-Mix principle as the basis for planning meals for large groups;
3. analyse menus to ensure that recommended nutrient standards are met for people of various age groups and health conditions;
4. state the principles of menu planning;
5. plan multi-course menus for various occasions and settings incorporating a variety of cooking methods;
6. apply portion control in food service and presentation;
7. calculate and compare the real cost of offering different types of menus;
8. incorporate culturally acceptable dishes in planning and serving meals for different occasions and settings;
9. describe rules and regulations for maintaining a safe work environment;
10. plan and organize work for preparation and serving of large quantities of food;

UNIT 2

MODULE 3: FOOD PREPARATION AND SERVICE: LARGE QUANTITY AND COMMERCIAL (cont'd)

11. describe procedures for quality assurance in preparing, cooking and serving foods in large quantities.

CONTENT

1. Meal Planning

- (i) Nutritive value of foods based on the Caribbean food group classification.
- (ii) Principles of meal planning to promote nutritional balance in meals for persons of various ages and health conditions, including nutrition-related chronic diseases, iron deficiency anemia.
- (iii) Minimizing nutrient-loss through the proper selection and handling of food.
- (iv) Controlling or modifying energy and nutrient levels of fat, sugar, salt and sodium, fiber in dishes and meals.

2. Menu Planning

- (i) Types of menus: à la carte; table d'hôte; Du Jour; theme, static, cycle.
- (ii) Menus for breakfast; lunch and supper; brunch; dinner; cocktail in various settings, for example, full dining for schools, cafeterias, senior citizens and children's homes.
- (iii) Two to five-course menus.
- (iv) Principles of menu balance:
 - (a) aesthetics; cooking methods and processes; format; light to heavier-light;
 - (b) menu design: size, language, layout, print, material.
- (v) Adapting standardized recipes for preparing food in large quantity.
- (vi) Specialty menus; local cuisine and adapting traditional Caribbean dishes in meal presentation for various occasions.
- (vii) Facilities and equipment required for preparation and service of meals; large and small equipment used for different methods and batch sizes.

UNIT 2

MODULE 3: FOOD PREPARATION AND SERVICE: LARGE QUANTITY AND COMMERCIAL (cont'd)

3. Costing, Budgeting and Control

- (i) Purchasing requirements, forecasting, sources of supply, frequency of purchasing, storage conditions, commodity turnover, perishable and non-perishable food, methods of purchase: wholesale; retail, bulk purchase.
- (ii) Purchasing procedures and controls-purchasing specifications, ordering, delivery, pickup, inventory keeping.
- (iii) Costing of menus and use of standard menu; hidden costs and real cost.

4. Portion Control in preparation and serving food in large quantity

- (i) Determine portion sizes within a food establishment.
- (ii) Proportioning based on cost, nutritive content, clientele need and satisfaction.
- (iii) Sectioning techniques before and after preparation.
- (iv) “Batching” in preparation, cooking and serving - determining batch size.

5. Safety and sanitation in quantity food preparation and service

- (i) Causes and prevention of food-borne illnesses:
 - (a) micro-organisms and food spoilage;
 - (b) insect vectors;
 - (c) personal hygiene standards;
 - (d) selection, use and maintenance of utensils and equipment used in food preparation and service.

UNIT 2

MODULE 3: FOOD PREPARATION AND SERVICE: LARGE QUANTITY AND COMMERCIAL (cont'd)

- (ii) Analysis of critical control points to prevent hazards using the Hazard Analysis Critical Control Points (HACCP).
 - (iii) Time and temperature control in cooking, storing and serving food:
 - (a) methods, techniques and procedures; preventing cross-contamination;
 - (b) cooling or refrigeration before and after cooking, freezing, thawing, reheating, micro-waving.
 - (iv) Rules and regulations for maintaining a safe working environment:
 - (a) prevention and management of: fire, falls, cuts, scalds, electrical shock, explosions, chemical hazards, injuries;
 - (b) First Aid procedures;
 - (c) resuscitation techniques.
 - (v) Public Health Regulations.
- 6. Preparing, cooking and serving various dishes and meals**
- (i) Planning and organizing work in a commercial kitchen.
 - (ii) Preparation and cooking methods: various baked goods, stocks, soup, sauces, hot and cold beverage; sandwiches; snacks, for various occasions.
 - (iii) Preparing, cooking and serving various foods (available locally):
 - (a) meat; fish; poultry; eggs; cheese; milk; yoghurt;
 - (b) legumes; pulses and meat alternates;
 - (c) vegetables (dark green leafy, yellow, other);
 - (d) ground provision, rice, cornmeal, pasta;
 - (e) fruit (mature and immature).

UNIT 2

MODULE 3: FOOD PREPARATION AND SERVICE: LARGE QUANTITY AND COMMERCIAL (cont'd)

- (iv) Using different types of meal service on various occasions: Buffet, American or Plate, English, Family, French and Russian; Ethnic variations.
- (v) Product modification and development:
 - (a) sensory evaluation;
 - (b) advertising and sales;
 - (c) packaging and display of food products.

Suggested Teaching and Learning Activities

To facilitate the achievements of the objectives outlined in this Module, teachers are advised to engage students in the following teaching and learning activities.

1. Assign students to conduct research projects on menu planning.
2. Invite specialists to give lectures and demonstrations.
3. Assign students to work on practical laboratories and planning sessions.
4. Conduct field trips to institutions that prepare food on a large scale.
5. Engage students in class discussions.
6. Assign students to compile original recipes.

UNIT 2

MODULE 3: FOOD PREPARATION AND SERVICE: LARGE QUANTITY AND COMMERCIAL (cont'd)

RESOURCES

- Chesser, J.W. *The Art and Science of Culinary Preparation*, Florida: The Educational Institute of the American Culinary Federation, 1992.
- Gisslen, W. *Professional Cooking*, New York: John Wiley and Sons, 1999.
- Kinton, R. and Ceserrari, V. *Theory of Catering*, United Kingdom: Hodden and Stoughton, 2002.
- Midzer, D., Porter, N., and Sonnier, B. *Food Preparation for the Professional*, New York: John Wiley and Sons, 1987.

◆ OUTLINE OF ASSESSMENT

Each Unit of the syllabus will be assessed separately. The same scheme of assessment will be applied to both Units. Candidates' performance will be reported as a grade for each Module, as well as an overall grade for each Unit completed. There will be two components of assessment in each Unit as set out below:

- (i) External Assessment, undertaken on completion of the Unit. This component contributes 70% to the candidate's overall Unit grade.
- (ii) Internal Assessment, undertaken throughout the course of the Unit. This component contributes 30% to the candidate's overall Unit grade.

EXTERNAL ASSESSMENT

(70%)

On completion of a Unit, the candidate is expected to write two papers.

Paper 01 (1 hour 30 minutes)	This paper will consist of 45 multiple-choice items, 15 items based on each of the three Modules in the Unit. All items are compulsory.	30%
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Paper 02 (2 hours 30 minutes)	This paper comprises seven essay questions. There is one compulsory question on the three Modules and two optional questions on each of the three Modules. Candidates are required to answer one compulsory question and three other questions.	40%
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INTERNAL ASSESSMENT

(30%)

Paper 03	This component is assessed by the teacher and externally moderated by CXC. Candidates are required to produce a portfolio comprising two assignments.
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MODERATION OF INTERNAL ASSESSMENT

Internal Assessment Record Sheets will be sent each year to schools submitting students for the examinations.

All Internal Assessment Record Sheets and sample of assignments must be submitted to CXC by May 31 of the year of the examination. A sample of assignments will be requested by CXC for moderation purposes. These samples will be re-assessed by CXC Examiners who moderate the Internal Assessment. Teachers' marks may be adjusted as a result of moderation. The Examiners' comments will be sent to schools.

Copies of the students' assignments that are not submitted must be retained by the school until three months after publication by CXC of the examination results.

ASSESSMENT DETAILS

External Assessment (70% of Total Assessment)

Paper 01 (1 hour 30 minutes - 30% of Total Assessment)

1. Composition of Paper

- (i) Paper 01 will assess the candidates' grasp of critical nutrition principles and their mastery of relevant skills.
- (ii) This paper will consist of nine compulsory, short-answer questions on the three Modules.

2. Mark Allocation

- (i) This paper is worth 90 marks.
- (ii) Each question is worth 10 marks.
- (iii) Paper 01 contributes 30% to the candidate's final grade.

3. Question Type

This paper comprises nine short-answer questions, which may contain a variety of stimulus material.

Paper 02 (2 hours 30 minutes - 40% of Total Assessment)

ASSESSMENT DETAILS

1. Composition of Paper

This paper comprises seven essay questions arranged in four sections. Candidates must answer FOUR questions, one from each section.

- | | | |
|-------------|---|--|
| Section I | - | One compulsory structured question testing objectives across all Modules. |
| Section II | - | Two questions from which candidates will answer one. Questions will test objectives in Module 1. |
| Section III | - | Two questions from which candidates will answer one. Questions will test objectives in Module 2. |
| Section IV | - | Two questions from which candidates will answer one. Questions will test objectives in Module 3. |

INTERNAL ASSESSMENT (30%)

Paper 03 (30%)

1. Composition of Paper

This paper is a portfolio comprising two assignments, which test objectives in one or more of the Modules. Candidates, in consultation with the teacher and following the guidelines provided by the Council, must select TWO activities for each Unit. Objectives on which assignments will be based may be drawn from any Modules(s) in the syllabus.

2. Mark Allocation

- (i) This paper is worth 90 marks. Thirty marks will be allocated to Assignment 1 and sixty marks to Assignment 2.
- (ii) This component tests the candidate's ability to:
 - evaluate nutrition information and principles;
 - develop and adapt recipes by conducting experimental research.
- (iii) This paper contributes 30% to the candidates' final grade.

3. Question Type

Candidates will be required to compile a portfolio comprising TWO different activities. These could take the form of practical assignments, research activities or experimentation.

GUIDELINES FOR CONDUCT OF THE INTERNAL ASSESSMENT

Internal Assessment is an integral part of student assessment in the course covered by this syllabus. It is intended to assist students in acquiring certain knowledge, skills and attitudes that are critical to the subject. The activities for the Internal Assessment are linked to the Modules and should form part of the learning activities to enable the student to achieve the objectives of the syllabus.

During the course of study of the subject students obtain marks for the competence they develop and demonstrate in undertaking their Internal Assessment assignment. These marks contribute to the final marks and grades that are awarded to students for their performance in the examination.

The guidelines provided in this syllabus for selecting appropriate tasks are intended to assist teachers and students in selecting assignments that are valid for the purpose of Internal Assessment. These guidelines are also intended to assist teachers in awarding marks according to the degree of achievement in the Internal Assessment component of the course. In order to ensure that the scores awarded by teachers are not out of line with the CXC standards, the council undertakes the moderation of a sample of the Internal Assessment assignments marked by each teacher.

Internal Assessment provides an opportunity to individualize a part of the curriculum to meet the needs of students. It facilitates feedback to the students at various stages of the experience. This helps to build the self-confidence of the students as they proceed with their studies. Internal Assessment further facilitates the development of essential investigative and practical skills that allow the student to function more effectively in his or her chosen vocation. Internal Assessment, therefore, makes a significant and unique contribution to the development of relevant skills of the students. It also provides an instrument for testing them and rewarding them for their achievements.

1. Teachers are expected to monitor the candidate in terms of the selection of the activities to be undertaken, adherence to the requirements of the mark scheme, and the timely submission of assignments to the teacher for assessment.
2. Marks must be submitted to CXC on a yearly basis on the Internal Assessment form provided. The forms should be despatched for submission to CXC by May 31 of the year in which the examination is to be written.
3. **Candidates who do not fulfil the requirements for the Internal Assessment, will be considered absent from the whole examination.**
4. A sample of assignments will be requested by CXC for MODERATION purposes. These samples will be re-assessed by CXC Examiners who moderate the Internal Assessment. Teachers' marks may be adjusted as a result of moderation. The Examiners' comments will be sent to the teachers in a Feedback Report.

Details of Assignments

Each candidate will be required to compile a portfolio comprising TWO assignments. Assignments will test objectives in one or more of the Modules and these objectives will be selected by the candidate in consultation with the teacher. **A candidate's portfolio will comprise TWO assignments follows:**

- Module 1 - Research
- Modules 2 - Product Development

Candidates are encouraged to use a thematic approach where applicable to the selection of activities for the portfolio. If a thematic approach is used, a topic may be selected from the objectives identified in one or more of the Modules in the syllabus, and research will be conducted on that topic for Assignment 1. The research will form the basis of the experimentation and product development for Assignment 2. Hence, the research undertaken for Assignment 1 will contribute to, and enhance, the experimentation and product development in Assignment 2.

CRITERIA FOR ASSESSING PORTFOLIOS

MODULE 1 (RESEARCH – 30 marks)

KNOWLEDGE	5
<ul style="list-style-type: none">• Demonstrate knowledge of relevant facts• Relate information to the region/community• Review the literature• Utilize a variety of sources	<ul style="list-style-type: none">2111
USE OF KNOWLEDGE	17
<ul style="list-style-type: none">• Present and discuss data• Identify causal factors and show how they interact with each other• Infer, predict, draw conclusions and solve problems• Make recommendations• Draw conclusions• Organize report coherently	<ul style="list-style-type: none">433322
PRACTICAL AND EXPERIMENTAL SKILLS	5
<ul style="list-style-type: none">• Collect, analyze and evaluate data• Discuss field observations	<ul style="list-style-type: none">23

COMMUNICATION OF INFORMATION	3
• Communication of information in a logical way by using correct grammar	<u>3</u>
Sub-total	30

ASSIGNMENT 2 (PRODUCT DEVELOPMENT – 60 marks)

KNOWLEDGE	10
• Demonstrate knowledge of relevant facts	4
• Relate information to the region/community	2
• Utilize a variety of resources	4
USE OF KNOWLEDGE	10
• Use facts, concepts, principles and procedures	4
• Present a written report, using drawings or other graphical representation which are clear, concise, accurate and relevant to the investigation	4
• Use appropriate scientific and qualitative treatment	2
PRACTICAL AND EXPERIMENTAL SKILLS	34
• Recognize the problem and formulate valid hypotheses	3
• Choose appropriate experimental research methods and equipment	3
• Record and report observations and results accurately	6
• Plan and execute procedures in a logical sequence within the time allotted	3
• Modify experimental methods after critical or unexpected outcomes	10
• Develop a creative product	3
• Develop a good quality product	6
COMMUNICATION OF INFORMATION	6
• Communication of information in a logical way	3
• Communication of information using correct grammar	3
Sub-total	<u>60</u>
Grand Total	<u>90</u>

SELECTION OF ACTIVITIES FOR PORTFOLIOS

Following is a list of suggested activities which are examples of the types of assignments which may be undertaken by candidates.

UNIT 1

Assignment 1

One exercise involving collection, analysis, and evaluation of data in one of the following areas:

- (i) dietary assessment;
- (ii) anthropometric assessment;
- (iii) dietary practices.

Assignment 2

One activity involving the modification and sensory evaluation of a basic recipe for an indigenous dish to reduce one or more of the following:

- (i) total calories;
- (ii) fat;
- (iii) sugar;
- (iv) sodium.

The experimentation conducted on the basic recipe must be clearly indicated.

UNIT 2

Assignment 1

One activity involving research into:

- (i) cultural practices that influence food choices, preferences and habits;
- (ii) tools and equipment used in preparing and cooking indigenous Caribbean dishes.

Assignment 2

One activity involving the development of an original product in large quantity. The assignment must include the activities from start up of experimentation to the marketing stage, including costing, progress and summary report.

◆ REGULATIONS FOR PRIVATE CANDIDATES

Private candidates will be required to sit all components of the examination. Private candidates are required to write all papers.

A private candidate must identify a teacher or tutor from a registered institution (school or technical institute or community college) who will assess and approve the candidate's submissions for the Internal Assessment component of the syllabus. The name, school, and territory of the identified teacher or tutor should be submitted to the Council on registration for the subject.

◆ REGULATIONS FOR RESIT CANDIDATES

Resit candidates must re-write Papers 01 and 02 of the examination for the year in which they re-register. However, resit candidates who have earned a moderated score 50% or more of the maximum score for the Internal Assessment component may elect not to repeat this component, provided they re-write the examination no later than 2 years immediately following their first attempt. The marks for the Internal Assessment may be carried forward to subsequent sittings of the same Unit taken. Re-sit candidates who have obtained a moderated score of less than 50% of the maximum score for the Internal Assessment component must repeat the component at any subsequent sittings.

Resit candidates may enter through schools, recognised educational institutions or the Local Registrar's Office.

◆ ASSESSMENT GRID

The Assessment Grid for each Unit contains marks assigned to papers and to Modules and percentage contributions of each paper to total scores.

PAPERS	MODULE 1	MODULE 2	MODULE 3	TOTAL (%)
External Assessment				
Paper 01	15	15	15	45 (30)
Paper 02	40	40	40	120 (40)
Internal Assessment				
Paper 03	30	30	30	90 (30)
TOTAL	85	85	85	255 (100)

◆ MINIMUM EQUIPMENT LIST

MINIMUM EQUIPMENT LIST FOR EVERY 15 STUDENTS

	Quantity
• Microscope	2
• Bunsen burner	4
• Beakers	6
• Casserole dishes	6 sets
• Kitchen Scale	4
• Thermometer	4
• Measuring Cups	4 sets
• Measuring Spoons	4 sets
• Refrigerator	2
• Cooker (four burners)	3
• Freezer	1 medium
• Large Kitchen cupboards	1
• Kitchen knives set	2 sets
• Meat slicer	1
• Cake mixer (for commercial and domestic quantities)	1 each
• Juicer - Electric	1
• Blender	3
• Food Processor and its attachments	1
• Fire Extinguishers	3
• First aid kits	2
• Baking Sheets	6
• Loaf tins	6
• Pastry Brushes	6
• Food Warmers/Bain Maire	1
• Heating Chamber	1
• Food covers	6
• Kitchen Forks	12
• Fish slicer	6
• Sieves-large and small	6 each
• Graters	6
• Garnishing Tools	2 sets
• Basic Small gardening Tools	2 each
• Pressure Cooker	2
• Food preservation Pots and pans	2 sets
• Bottles for preservation	4 dozens
• Sealing Machine	1
• Pots and pans large and small	6 each
• Wooden spoons	2 dozens
• Spatulas	2 dozens

	Quantity
• Dinner Plates	12
• Dinner Knives	12
• Dinner Forks	12
• Dinner Spoons	12
• Dessert forks	12
• Cereal bowls	12
• Soup Bowls and Plates	12
• Water Tumblers	12
• Cruet sets	12
• Fish Knives	12
• Cheese knife	12

GLOSSARY

A la Carte	-	dishes prepared to order and priced individually.
Acceptable Daily Intake (ADI)	-	the amount of chemical that if ingested daily over a lifetime appears to be without appreciable risk.
Anthropometry	-	the science that deals with the measurement of the size, weight and proportions of the human body.
Appetite	-	a natural desire to eat, especially when food is present.
Complementary Food	-	any food, whether manufactured or locally prepared, suitable as complement to breast milk or to a commercial or home-prepared formula, when either becomes insufficient to satisfy the nutritional requirements of the infant. (Such food was previously called (“Weaning Food” or “breast milk supplement”).
Convenience Foods	-	foods which have been prepared or processed to reduce the time needed for preparation, to make the product last longer and to make it easier to carry and store.
Batching	-	preparation and cooking of food in designated amounts at timed intervals, to provide for continuous supply to meet customer demands, to ensure safety of the food, and to prevent wastage.
Biotechnology	-	the use of natural and engineering science to alter the composition of natural cells and organisms to produce alternative products services.
Dietary Guidelines	-	sets of advisory statements that give dietary advice for the population in order to promote overall nutritional well-being and address all diet-related conditions.
Dietary Goals	-	desirable food intakes that support optimal nutrition and healthy dietary goals can be used for planning, often over the long term at a national level. They are usually expressed in terms of average national intakes.
Exclusive Breastfeeding	-	giving an infant no other food or drink, not even water, apart from breast milk (including expressed breast milk) excepting drops or syrups consisting of vitamins, mineral supplements or medicines.
Food Additive	-	a chemical or other substance added to a food product either intentionally or accidentally

Food Enrichment	-	the re-adding of nutrients lost during processing to meet a specific standard for the food.
Food Preservation	-	a process used to minimize or control the number of spoilage microorganisms in foods, thereby making the foods safe and extending the shelf life.
Food Science	-	deals with growth, preservation and manufacture food, microbiology and the study of food additives.
Food Security	-	a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.
Food ways	-	attitudes and beliefs about food and the ways in which that food is acquired stored, prepared and consumed.
Fortification	-	the addition of nutrients at levels higher than those found in the original or comparable foods. The process whereby macro-or micro-nutrients are added to foods commonly eaten to maintain or improve the nutritional quality of individual foods in the total diet.
Functional Foods	-	food products sold for health benefits.
Genetically Engineered Foods	-	foods produced by using laboratory techniques to transfer genes from any plant, animal, virus or organism, including a human into any other organism to produce a desired effect.
Generally Recognised as Safe (GRAS)	-	a list of commonly used ingredients (for example, salt, sugar some flavourings) not evaluated by prescribed testing procedures but which were already in use when the 1959 Food Additives Amendments was enacted.
Hazard Analysis Critical Control Points (HACCP)	-	a system for monitoring food production involving the analysis of potential hazards, identification of critical control points and the application of measures to prevent or reduce hazards.
Hunger	-	a strong desire to eat, associated with a sensation resulting from a lack of food characterized by dull or acute pain in the epigastrium or lower part of the chest.
Market Forms of Meat	-	these can be classified in these forms – carcasses, partial carcasses, primals and fabricated cuts of beef, lamb, veal and pork.

Market Forms of Poultry	-	the species such as chicken, turkey or duck; the class depending on age or sex; the style, the amount of cleaning and processing (live, dressed: killed, bled and plucked), ready to cook - whole, cut up, or parts.
Nutraceuticals	-	substances that may be considered part of a food that is intended to provide medical or health benefits. Isolated nutrients, dietary supplements genetically engineered “designer food”, herbal products and specially processed soups, cereals and beverages are included in this category.
Nutrition Related Diseases	-	diseases conditioned by either an excess or deficiency of energy and essential nutrients.
Nutritional Status	-	state of the body resulting from the consumption and utilization of nutrients. It is a measurement of the extent to which the physiologic need for nutrients is being met.
Nutritional Assessment	-	an evaluation of the nutritional status of individuals or populations through measurements of food and nutrient intakes and evaluation of nutrition – related health indicators to identify the possible occurrence, nature and extent of impaired nutritional status.
Phytochemicals	-	chemical substances in plants some of which perform important functions in the human body.
Polypharmacy	-	a situation where a single patient is taking a variety of prescribed medications concurrently. These medications may be complementary and related to a single condition and prescribed by one physician or they may be prescribed for a number of different conditions and by a number of different physicians.
Portion	-	standard size and composition of food and drink.
Recommended Dietary Allowances (RDA) (also known in different countries as Recommended Nutrient Intakes (RNI)).	-	Recommended Dietary Intakes (RDI) or Dietary Reference Values (DRV), the level of intake of energy and essential nutrients considered to be adequate to meet the known nutritional needs of practically all healthy persons.
Risk factor	-	behaviour or characteristic which, if present and active, increases the probability of a particular disease in a group of persons who have the factor compared to an otherwise similar group of persons who do not.
Satiety	-	being full to satisfaction with food.

Synergism	-	the interaction of two or more presumably causal variables, so that the combined effect is clearly greater than the sum of the individual effects.
Table d'hôte	-	a meal at a fixed price.

The definitions in the Glossary have been extracted from the following:

CFNI	<i>Recommended Dietary Allowances for the Caribbean</i> , Jamaica, 1994.
CFNI	<i>Guidelines for Young Child Feeding in the Caribbean</i> , Jamaica, 1999.
Campbell, V.	<i>Caribbean Foodways</i> , Jamaica: Caribbean Food and Nutrition Institute, 1988.
Gisslen, W.	<i>Professional Cooking</i> , New York: John Wiley and Sons, 1999.
Mahan, L.K. and Escott-Stumps, S.	<i>Krause's Food, Nutrition and Diet Therapy</i> , Philadelphia: W.B. Saunders Company, 1996.

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