

# Food Studies

Singapore-Cambridge General Certificate of Education  
Normal (Technical) Level (2020)

(Syllabus 6079)

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The Common Last Topics highlighted in yellow will not be examined in 2020 N(T)-Level national examination.



## **INTRODUCTION**

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The Food Studies syllabus is designed to provide Normal (Technical) students with knowledge of food commodities and the basic concepts of nutrition and meal planning, and understanding of their impact on health. It will equip students with the essential knowledge and skills to plan and prepare healthy meals using a variety of food commodities and methods of cooking.

The emphasis of the syllabus is on the practical application of knowledge and skills of the subject. A coursework element is included in the syllabus and students are expected to become increasingly competent in a wide range of practical and investigation skills. The sound theoretical knowledge and culinary skills acquired will help students to meet their present and future individual health needs as well as those of their family and the community.

The syllabus will also provide a foundation for students to pursue further learning in courses related to the food industry. It will incorporate authentic learning experiences with the provision of exposure to the food industry to build relevant work habits and skills.

## **AIMS**

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1. To develop students' understanding of food commodities
2. To equip students with the knowledge and skills to plan and prepare healthy meals using a variety of food commodities and methods of cooking
3. To develop students' understanding of the basic concepts of nutrition and meal planning, and their impact on health

## **ASSESSMENT OBJECTIVES**

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The assessment objectives for this subject are classified into two main areas:

### **(i) Subject Content Knowledge**

Candidates should be able to demonstrate knowledge and understanding of:

1. the properties of food commodities and how they can be used
2. the principles of various methods of preparation and cooking
3. basic concepts of nutrition and meal planning

### **(ii) Process Skills**

Candidates should be able to plan and carry out coursework in which they can:

1. investigate and develop ideas by:
  - defining a task question/problem situation
  - gathering and processing information
  - exploring and deriving learning from food preparation
2. make informed decisions with appropriate justifications
3. demonstrate good organisational and time management skills
4. apply different food preparation and cooking techniques in preparing dishes/meals
5. demonstrate proficient use of equipment and good management of resources in food preparation
6. evaluate the outcome of the task
7. communicate ideas effectively

## SCHEME OF ASSESSMENT

Assessment Objectives	Paper 1 Written Paper	Paper 2 Coursework	Overall
Subject Content Knowledge	25%	10%	35%
Process Skills	15%	50%	65%
Overall by component	40%	60%	100%

There will be **TWO** papers:

Paper 1 40% (80 marks)

Paper 2 60% (60 marks)

### Paper 1 (1 hour 30 minutes) – Written Paper

This will test the candidates' knowledge of theory and practice in response to the assessment objectives. Candidates are to answer all questions.

Section A: 20 marks (short-answer type questions)  
 Section B: 28 marks (data response type questions)  
 Section C: 32 marks (structured type questions)  
 Sub-total: 80 marks

### Paper 2 – Coursework

Candidates will be given an assignment at the beginning of the examination year. It should be completed for assessment by July of that year. The assignment will have a practical focus where the candidates are required to apply their knowledge and understanding in relation to the subject content. It will provide candidates with the opportunity to display their abilities to create interesting product(s). A total of 35 hours should be assigned during curriculum time to complete the assignment.

Assessment will focus on the background study of the factors of the given assignment; the ability to select and apply relevant content knowledge to explore ideas in food preparation to inform the final choice of cooked product and recipes related to the assignment; the planning and execution of the task; and the ability to review the product.

Background Study (B)		(6 marks)
Exploration (E)		(6 marks)
Decision Making (DM)		(6 marks)
Planning (P)		(6 marks)
Execution (Exe)	– organisation and management	(12 marks)
	– method	(12 marks)
	– product and presentation	(6 marks)
Evaluation (Eva)		(6 marks)
		<b>(60 marks)</b>

### Presentation of Coursework Folio

The coursework folios should be securely bound or filed in a flat A4 folder. Ring folders should not be used. Documentation can either be handwritten or word processed. The recommended typeface is Arial, minimum font size 11, or Times New Roman, minimum font size 12. Only A4 plain white or lined sheets should be used. All pages should be clearly numbered. The folio must not exceed **16** pages.

## ASSESSMENT CRITERIA FOR PAPER 2: COURSEWORK

Process/Tasks	Indicators The candidate:			
	No Marks	LOW	MEDIUM	HIGH
<b>Background Study (B)</b>	<ul style="list-style-type: none"> <li>No evidence of Background Study</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Identifies and considers few factors</li> <li>Shows little understanding of the task requirements</li> <li>Gathers information but requires help in selecting and presenting relevant information</li> </ul> <p>1–2 marks</p>	<ul style="list-style-type: none"> <li>Identifies and considers some factors</li> <li>Shows some understanding of the task requirements</li> <li>Gathers, selects and presents some relevant information from a range of sources</li> </ul> <p>3–4 marks</p>	<ul style="list-style-type: none"> <li>Identifies and considers most factors</li> <li>Shows a clear understanding of the task requirements</li> <li>Gathers, selects and presents relevant information from a range of sources</li> </ul> <p>5–6 marks</p>
<b>Exploration (E)</b>	<ul style="list-style-type: none"> <li>No evidence of Exploration</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Provides few observation and learning acquired from the outcome of exploration</li> <li>Provides brief explanation on the result of the exploration to inform final choice of cooked product</li> </ul> <p>1–2 marks</p>	<ul style="list-style-type: none"> <li>Provides some observation and learning acquired from the outcome of exploration</li> <li>Provides some explanation on the result of the exploration to inform final choice of cooked product</li> </ul> <p>3–4 marks</p>	<ul style="list-style-type: none"> <li>Provides an adequate observation and learning acquired from the outcome of exploration</li> <li>Provides adequate explanation on the result of the exploration to inform the final choice of cooked product</li> </ul> <p>5–6 marks</p>
<b>Decision Making (DM)</b>	<ul style="list-style-type: none"> <li>No evidence of Decision Making</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Makes decisions that are not appropriate to the task</li> <li>Justifies decisions with little reference to the information gathered</li> </ul> <p>1–2 marks</p>	<ul style="list-style-type: none"> <li>Makes decisions that are somewhat appropriate to the task</li> <li>Justifies decisions adequately using some relevant information</li> </ul> <p>3–4 marks</p>	<ul style="list-style-type: none"> <li>Makes decisions that are appropriate to the task</li> <li>Justifies decisions well, using relevant information</li> </ul> <p>5–6 marks</p>
<b>Planning (P)</b>	<ul style="list-style-type: none"> <li>No evidence of Planning</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Produces an unclear and poorly sequenced time plan</li> <li>Shows insufficient work for the time allocated for the dishes chosen</li> </ul> <p>1–2 marks</p>	<ul style="list-style-type: none"> <li>Produces a clear time plan with some sequencing</li> <li>Shows adequate work for the time allocated for the dishes chosen</li> </ul> <p>3–4 marks</p>	<ul style="list-style-type: none"> <li>Produces a well sequenced and detailed time plan</li> <li>Shows sufficient work for the time allocated for the dishes chosen</li> </ul> <p>5–6 marks</p>

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Process/Tasks	Indicators The candidate:			
	No Marks	LOW	MEDIUM	HIGH
<b>Execution (Exe) Organisation and Management</b>	<ul style="list-style-type: none"> <li>No evidence of organisation and management</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Requires help most of the time and is not organised</li> <li>Shows ineffective use of time and resources</li> <li>Handles food and equipment in an unsafe and unhygienic manner</li> </ul> <p>1–4 marks</p>	<ul style="list-style-type: none"> <li>Works independently, showing some organisational ability</li> <li>Shows some good use of time and resources</li> <li>Handles food and equipment safely and hygienically some of the time</li> </ul> <p>5–8 marks</p>	<ul style="list-style-type: none"> <li>Works independently, showing a high level of organisational ability</li> <li>Shows effective and economical use of time and resources</li> <li>Handles food and a variety of equipment safely and hygienically</li> </ul> <p>9–12 marks</p>
<b>(Exe) Method</b>	<ul style="list-style-type: none"> <li>No evidence of method</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Selects and uses equipment inappropriately most of the time</li> <li>Shows a high level of proficiency in the application of a few food preparation techniques</li> <li>Shows a high level of competency in the application of a few food preparation methods</li> </ul> <p>1–4 marks</p>	<ul style="list-style-type: none"> <li>Selects and uses equipment appropriately some of the time</li> <li>Shows a high level of proficiency in the application of some food preparation techniques</li> <li>Shows a high level of competency in the application of some food preparation methods</li> </ul> <p>5–8 marks</p>	<ul style="list-style-type: none"> <li>Selects and uses equipment appropriately most of the time</li> <li>Shows a high level of proficiency in the application of all food preparation techniques</li> <li>Shows a high level of competency in the application of a variety of food preparation methods</li> </ul> <p>9–12 marks</p>
<b>(Exe) Product and Presentation</b>	<ul style="list-style-type: none"> <li>No evidence of product and presentation</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Produces food products that are low in quality and standard</li> <li>Presents food products unattractively and inappropriately</li> </ul> <p>1–2 marks</p>	<ul style="list-style-type: none"> <li>Produces food products that are sufficiently good in quality and standard</li> <li>Presents food products fairly attractively and appropriately</li> </ul> <p>3–4 marks</p>	<ul style="list-style-type: none"> <li>Produces food products that are of a high quality and standard</li> <li>Presents food products attractively and appropriately</li> </ul> <p>5–6 marks</p>
<b>Evaluation (Eva)</b>	<ul style="list-style-type: none"> <li>No evidence of evaluation</li> </ul> <p>0 marks</p>	<ul style="list-style-type: none"> <li>Provides a description of the food product with little or no evaluation</li> <li>Identifies few strengths and weaknesses of the practical outcome</li> </ul> <p>1–2 marks</p>	<ul style="list-style-type: none"> <li>Provides some evaluation of the food product</li> <li>Identifies some strengths and weaknesses of the practical outcome</li> </ul> <p>3–4 marks</p>	<ul style="list-style-type: none"> <li>Provides an adequate evaluation of the food product</li> <li>Identifies most strengths and weaknesses of the practical outcome</li> </ul> <p>5–6 marks</p>

**Total marks: 60**

## USE OF CALCULATORS

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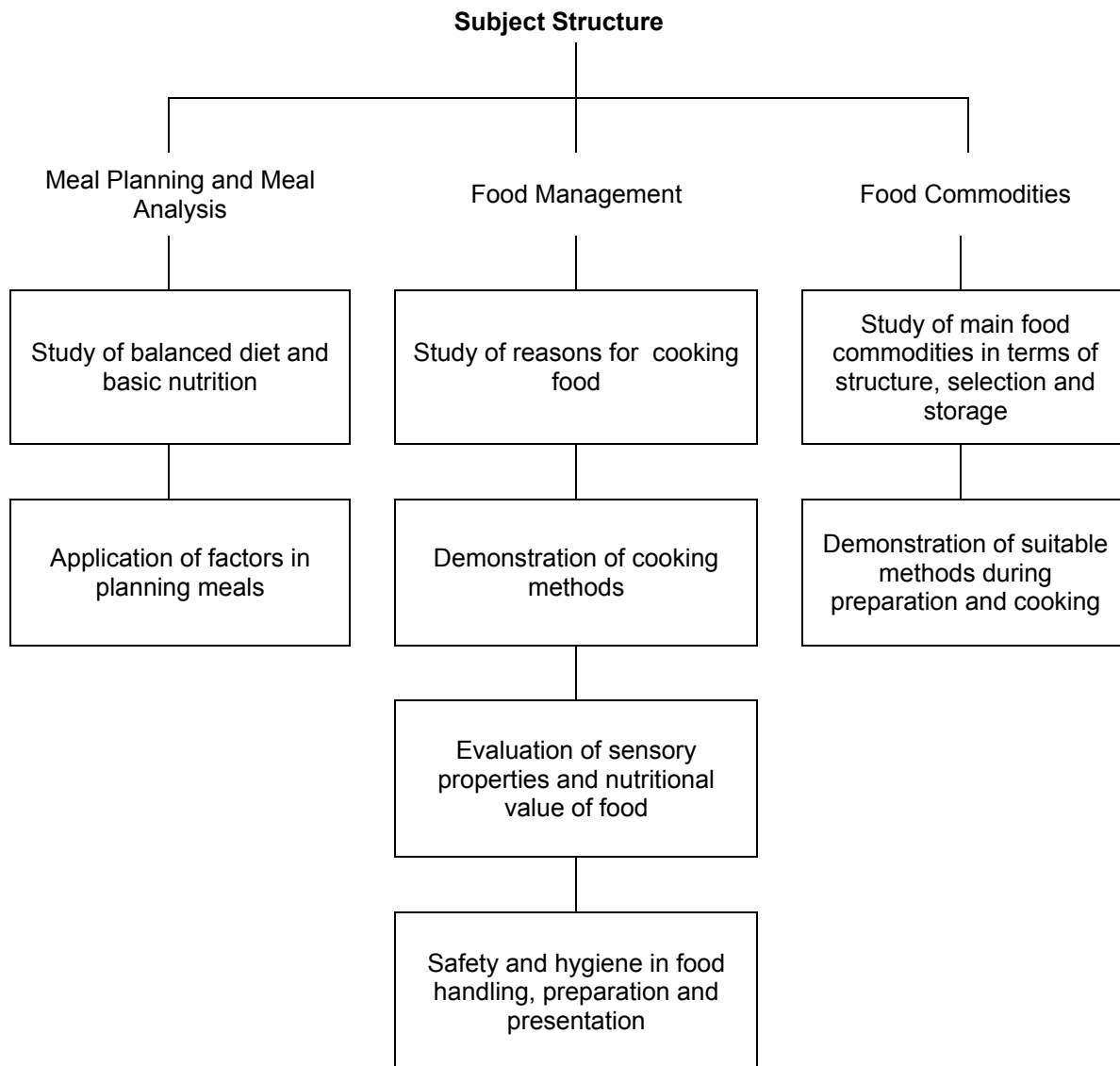
An approved calculator may be used in all papers.

## SUBJECT CONTENT

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The syllabus is organised into three key content areas: Meal Planning and Meal Analysis, Food Management, and Food Commodities. Within each content area, topics are presented together with the associated learning outcomes. This organisation helps the teacher to identify the content requirements and learning outcomes for students. In designing the teaching and learning, appropriate links to various topics should be made to ensure meaningful learning for students. Theory could be infused into practical work so that students could learn concepts in an authentic setting.

The diagram below gives an overview of the subject content.



## Learning Outcomes

TOPIC	LEARNING OUTCOMES Candidates will be able to:
<b>1. Meal Planning and Meal Analysis</b>	
a) Balanced Diet	<ul style="list-style-type: none"> <li>i) Explain the term “balanced diet”</li> <li>ii) Explain the importance of having a “balanced diet”</li> <li>iii) Explain the functions of different nutrients in the body: protein, carbohydrate, fat, vitamins and minerals</li> <li>iv) Explain the importance of water and dietary fibre (non-starch polysaccharide) in the body</li> <li>v) Define the term “malnutrition”</li> </ul>
b) Planning Meals	<ul style="list-style-type: none"> <li>i) Explain the factors to consider when planning meals: <ul style="list-style-type: none"> <li>– nutritional needs in relation to age (young children, school children, teenagers, elderly), gender, level of physical activity</li> <li>– nutritional needs in terms of health status (coronary heart disease, diabetes, hypertension, obesity)</li> <li>– individual preferences (likes/dislikes, vegetarians (lacto-vegetarians, lacto-ovo vegetarians, vegans))</li> <li>– ethnic customs and traditions (Chinese, Indian, Malay, Eurasian), religions (Buddhism, Christianity, Hinduism, Islam)</li> <li>– availability of resources (seasonal, budget)</li> </ul> </li> <li>ii) Demonstrate the use of nutritional tools when planning and evaluating meals</li> </ul>
<b>2. Food Management</b>	
a) Reasons for Cooking Food	Explain the reasons for cooking food
b) Heat Transference	Describe how heat is transferred when food is cooked by conduction, convection and radiation
c) Method of Cooking	<ul style="list-style-type: none"> <li>i) Explain the principles of different methods of cooking <ul style="list-style-type: none"> <li>– Dry heat: roasting, baking, grilling,</li> <li>– Moist heat: boiling, simmering, stewing, steaming</li> <li>– Hot fat: frying</li> <li>– Microwaving</li> </ul> </li> <li>ii) Demonstrate the use of different methods of cooking in preparing and cooking a variety of dishes, including: <ul style="list-style-type: none"> <li>– Pastries (shortcrust, rough puff)</li> <li>– Cakes and biscuits (rubbed-in, creamed, whisked)</li> <li>– Local cakes, desserts and pastries</li> <li>– Sauces (roux, blended)</li> <li>– Batters (thin, thick)</li> </ul> </li> </ul>
d) Presentation of Food	Identify and demonstrate suitable ways of serving and presenting food appropriately and attractively
e) Evaluation of Food	Compare and evaluate the sensory properties (texture, flavour, appearance, aroma) of food
f) Food Safety	Explain and demonstrate hygienic practices when handling, preparing and presenting food



TOPIC	LEARNING OUTCOMES Candidates will be able to:
<b>3. Food Commodities</b>	
a) Meat and Poultry	<ul style="list-style-type: none"> <li>i) Name the types of meat: <ul style="list-style-type: none"> <li>– beef, pork, mutton, chicken</li> </ul> </li> <li>ii) State the nutritional value of the different types of meat</li> <li>iii) Identify the factors that produce tough and tender meat</li> <li>iv) Describe the structure of meat and its effects on preparation and cooking</li> <li>v) Explain the factors to consider when choosing meat</li> <li>vi) Explain how meat should be stored</li> <li>vii) Demonstrate the use of suitable methods when preparing and cooking meat</li> </ul>
b) Seafood	<ul style="list-style-type: none"> <li>i) Name the types of seafood and specific examples of these types of seafood: <ul style="list-style-type: none"> <li>– fish (oily, white), shellfish (crustaceans, molluscs)</li> </ul> </li> <li>ii) State the nutritional value of seafood</li> <li>iii) Identify the cuts of fish (cutlet, fillet, steak, tailpiece)</li> <li>iv) Describe the structure of fish and its effects on preparation and cooking</li> <li>v) Explain the factors to consider when choosing seafood</li> <li>vi) Explain how seafood should be stored</li> <li>vii) Demonstrate the use of suitable methods when preparing and cooking seafood</li> </ul>
c) Cereals and Cereal Products	<ul style="list-style-type: none"> <li>i) Name the types of cereals: <ul style="list-style-type: none"> <li>– wheat, corn, oats, rice, barley</li> </ul> </li> <li>ii) Name the types of cereal products: <ul style="list-style-type: none"> <li>– flour, bread, pasta, noodles</li> </ul> </li> <li>iii) Identify the basic structure of cereal grains (bran, endosperm, germ)</li> <li>iv) State the nutritional value and uses of cereal grains (bran, endosperm, germ)</li> <li>v) Explain the factors to consider when choosing cereals and cereal products</li> <li>vi) Explain how cereals and cereal products should be stored</li> <li>vii) Demonstrate the use of suitable methods when preparing and cooking cereals and cereal products</li> </ul>
d) Dairy Products	<ul style="list-style-type: none"> <li>i) Name the types of dairy products: <ul style="list-style-type: none"> <li>– milk (full-cream, skimmed, condensed, evaporated, powdered)</li> <li>– cheese (Parmesan, Cheddar, mozzarella, cottage)</li> <li>– yoghurt and cultured milk drinks</li> <li>– butter and cream</li> </ul> </li> <li>ii) State the nutritional value of dairy products</li> <li>iii) Explain the factors to consider when choosing dairy products</li> <li>iv) Explain how dairy products should be stored</li> <li>v) Demonstrate the use of suitable methods when preparing and cooking dairy products</li> </ul>
e) Eggs	<ul style="list-style-type: none"> <li>i) Identify the structure of an egg (airspace, chalazae, egg shell, egg white, egg yolk, shell membrane)</li> <li>ii) State the nutritional value of an egg</li> <li>iii) Explain the factors to consider when choosing eggs</li> <li>iv) Explain how eggs should be stored</li> <li>v) Describe the uses of eggs</li> <li>vi) Demonstrate the use of suitable methods when preparing and cooking eggs</li> </ul>
f) Vegetables	<ul style="list-style-type: none"> <li>i) Name and classify the different vegetables: <ul style="list-style-type: none"> <li>– roots, tubers, bulbs, leaves, stems, flowers, fruit, seeds (pulses and legumes)</li> </ul> </li> <li>ii) State the nutritional value of vegetables</li> <li>iii) Explain the factors to consider when choosing vegetables</li> <li>iv) Explain how vegetables should be stored</li> <li>v) Demonstrate the use of suitable methods when preparing and cooking vegetables</li> </ul>

<b>TOPIC</b>		<b>LEARNING OUTCOMES</b>	
		Candidates will be able to:	
g)	Fruit	i)	Name and classify the different fruit: – melons, berries, citrus, pome, stoned, tropical
		ii)	State the nutritional value of fruit
		iii)	Explain the factors to consider when choosing fruit
		iv)	Explain how fruit should be stored
		v)	Demonstrate the use of suitable methods when preparing and cooking fruit
h)	Convenience Food	i)	Define convenience food
		ii)	Name and classify convenience food: – ready-to-eat and ready-to-cook
		iii)	Explain the advantages and disadvantages of using convenience food
		iv)	Explain the factors to consider when choosing convenience food
		v)	Explain how convenience food should be stored
		vi)	Demonstrate the appropriate use of convenience food when preparing and cooking dishes/meals
i)	Flavourings and Herbs	i)	State the uses of flavourings and herbs
		ii)	State the difference between a herb and a spice
		iii)	Name some common herbs (coriander leaves, curry leaves, lemongrass, lime leaves, mint, oregano, rosemary, screwpine leaves, spring onion, sweet basil) and spices (cardamom, cinnamon, clove, cumin, five-spice powder, nutmeg, <i>Sichuan</i> pepper, turmeric)
		iv)	Explain how herbs and spices should be stored
		v)	Demonstrate the use of spices and herbs when preparing dishes/meals
j)	Fats and Oils	i)	Name the types of fat: – animal fat (butter, ghee, lard) – vegetable fat (cooking oil, margarine)
		ii)	State the nutritional value of fats and oils
		iii)	Explain how fats and oils should be stored
		iv)	Explain the choice and use of fats and oils in food preparation