

CHAPTER 12:

PLAN AND MANAGE MEALS

12.1 Introduction of the Unit of Learning / Unit of Competency

This unit addresses the unit of competency: plan and manage meals. This unit specifies the competencies required to plan and manage meals. It includes: determining client nutritional needs, assisting client with meal selection, formulating diet recipes and menu, preparing formulated meals, assessing food safety and hygiene and documenting meal planning and management.

12.2 Performance Standard

By the end of this unit of learning/competency, the trainee should be able to determine client nutritional needs as per workplace procedures; assist the client with meal selection as per the clients requirements and organisational procedures; formulate and guide on diet recipes and menu based on the care plan developed and organizational procedures; prepare formulated meals as per the menu and client nutritional needs; assess food safety and hygiene as per workplace procedures and food safety plan; and document meal planning and management in line with workplace policy and procedures.

12.3 Learning Outcomes

12.3.1 List of the Learning Outcomes

1. Determine client nutritional needs
2. Assist clients with meal selection
3. Formulate diet recipes and menu
4. Prepare formulated meals
5. Assess food safety and hygiene
6. Document meal planning and management

12.3.2 Learning outcome 1: Determine client nutritional needs

12.3.2.1 Learning activity

Learning activity	Special instruction
i. Obtain client diet history is	<ul style="list-style-type: none">➤ Collect clients' data as per work place procedures➤ Use diet planning tools➤ Apply diet planning principles
ii. Obtain client medical history	<ul style="list-style-type: none">➤ Assemble client medical background➤ Determine how medical background affects nutrition
iii. Analyze biochemical as per work place procedures	<ul style="list-style-type: none">➤ Interpret biochemical results➤ Use biochemical results to make nutritional diagnosis
iv. Carry out client clinical assessment as per client medical condition	<ul style="list-style-type: none">➤ Conduct clinical assessment➤ Observe clinical signs➤ Interpret clinical observation➤ Use clinical observations in making nutritional diagnosis

12.3.2.2 Information Sheet

Definition

- 1. Diet history:** It is a structured interview method consisting of questions about habitual intake of food
- 2. Medical history:** The part of a patient's life history that is important in determining the risk factors for, diagnosing, and treating a disorder, as in a history of exposure, symptoms, occupational, exposure to causative agents linked to a condition, physical trauma or infection
- 3. Client's data:** documentation collected from the patient and further sources on the pathogenesis of the illness.

Principles of Diet Planning

- **Adequacy:** Ensuring that the diet contains all nutrients in adequate amounts
- **Balance:** This principle requires that not too much of any type of a nutrient is provided in a diet. Intake of a particular nutrient should be equal to individual needs.
- **Calorie control:** Calorie control calls on one to ensure that amount of energy consumed is equal to energy expenditure. Not too many or too few calories are consumed.

- **Moderation:** Requires that no particular food will be consumed in excess. One food should not crowd the diet.
- **Variety:** Nutrients should be sourced from a variety of foods. There's no superfood as different types of foods contain different amounts of each nutrient.

i. Obtaining clients' diet history

This involves obtaining a diet history involves interviewing the client on the past and/or current food practices It also includes measuring/estimating adequacy of the food consumed (variety, amount, frequency, with whom, sources of food, preparation)

What to assess:

- Total energy and nutrient intake
- Macro- and micronutrient intake
- Water and fluid intake
- Eating habits
- Drug and alcohol intake
- Food preparation methods
- Factors hindering food intake

Tools and methods of dietary assessment are;

- Food record diaries
- 24 hour recall
- Food frequency
- Diet diversity
- Appetite assessment

ii. Analysis of Client's Biochemical Data:

Biochemical data, medical tests and procedures include laboratory data (e.g., electrolytes, glucose, lipid panel, and gastric emptying time). Laboratory values can be useful in assessing nutritional status, which includes; Kidney function test Liver function test (C-RP), Blood glucose, hemoglobin levels, electrolytes, cholesterol levels, Parathyroid function test.

• Normal Biochemical values

Cholesterol	Male & female	3.2-8.5mmol/litre or
		120-330mg/100ml
Glucose [fasting]	Male & female	3.3-5.9mmol/litre or
		60-108mg/100ml.

Ketones [total non-fasting.	Male & female	0.02-0.5mmol/litre or
		0.1-3.0mg/100ml.
Phosphate	Male & female	0.8-1.4mmol/litre or 2.5-4.3mg/100ml.

- **Urinary values [24 hr urinary excretion]**

Component	Gender	Value
Protein	”	Up to 00 g/24hrs.
Albumin	”	Up to 25mg/24hrs.
Ketones	”	0.1-0.3mmol or 5-15mg/24hrs.
Calcium	”	2.5-7.5mmol/24hrs.

- **Normal values in liver functions tests**

Component	Gender	Value
Total Serum Bilirubin		5-17 mmol/litre
Bilirubin esters	”	<6mmol/litre
Urine Bilirubin	”	Negative result
Serum albumin	”	35-50g/litre
Serum alkaline phosphate	”	30-110IU/litre
Serum alanine amino transferase	”	5-40IU/litre
Serum aspartate amino transferase	”	5-40IU/litre

iii. **Clinical assessment;** This involves physical observation/ judgement, Signs of nutrient deficiencies like visible wasting, hair changes, oedema, skin changes

Body part or system	Signs/Symptoms	Possible deficiency
Hair	Lackluster, Thinness, sparseness, dryness, dyspigmentation, easy pluckability, texture change	Proteins, protein-energy, Zinc, copper biotin.

Face	Paleness, Moon face (swollen), Greasy scaling around nostrils (nasolabial)	Riboflavin, Niacin, Pyridoxine, Iron
Eyes	Pale white eyes and eyelid lining (pale conjunctivae), Redness and fissuring of eyelid corners dullness and dryness (corneal or conjunctival xerosis), redness, lesions of conjunctivae (Bitot's spots)	Iron, folate, vitamin A, C, B ₂ , B ₆ and B ₁₂
Mouth	Angular redness, lesions or scars at the corners of the mouth (stomatitis), swelling and redness of lips and mouth (cheilosis)	Riboflavin Niacin pyridoxine iron
Tongue	Smoothness, slickness (filiform papillary atrophy), beefiness, redness, pain (glossitis), swollen, magenta color	Niacin, pyridoxine, riboflavin, vitamin B ₁₂ , folate, iron
Body part or system	Signs/Symptoms	Possible deficiency
Gums	Swelling, sponginess, bleeding, receding	Vitamin C
Skin	Dryness, scaling, lightening of skin color often centrally on the face (diffuse pigmentation), rough, gooseflesh skin (follicular hyperkeratosis), small skin hemorrhages (petechiae), excessive bruising, hyper pigmented patches that may peel off, leaving superficial ulcers or hypo pigmented skin (flaky paint dermatosis), oedema, delayed wound healing.	Vitamin A, C and K, Zinc, essential fatty acids, protein, Niacin.
Nails	Spoon-shape (kiolonychia), pale, brittle, ridged.	Iron
Glands	Enlarged thyroid or parotid	Protein, iodine
Musculoskeletal system	Bowlegs knock knees, enlarged joints, hemorrhages, muscle and fat wasting.	Protein-energy, Vitamin D and C, Calcium
Neurological system	Mental confusion, irritability, psychomotor changes, motor weakness, sensory loss	Thiamin, Riboflavin and Vitamin B12

- iv. Nutrition-focused physical findings Include oral health, general physical appearance, muscle and subcutaneous fat wasting, and affect.
- v. **Client history:** This includes medication and supplement history, social history, medical/health history, and personal history.

12.3.2.3 *Self-assessment*

1. List factors that are assessed when obtaining client history
2. List the liver function tests
3. Define clinical assessment
4. _____ is a structured interview method consisting of questions about habitual intake of food
 - a. Food security
 - b. Diet history
 - c. Diet plan
 - d. Food habits
5. _____ is the principle of diet planning that requires that no particular food will be consumed in excess. One food should not crowd the diet.
 - a. Variety
 - b. Adequacy
 - c. Moderation
 - d. Balance
6. Which one of the following is not part of diet history
 - a. Eating habits
 - b. Drug and alcohol intake
 - c. Food preparation methods
 - d. Hemoglobin level
7. Which one of the following is a part of clinical assessment
 - a. Blood glucose
 - b. Paleness
 - c. Serum protein
 - d. Fluid intake
8. Which one of the following laboratory values is an indicator of liver function
 - a. Protein calcium

- b. Urinary bilirubin
- c. Dry skin
- d. Ketones

12.3.2.4 Tools, equipment, supplies and materials

- Stationery
- Weighing scale
- Stadiometer
- Dietary assessment tools e.g. 24 hour recall, food diary, food frequency
- WHO guidelines
- MOH
- Ministry of Education
- Skills lab
- Use of LCDs, video clips, charts and other teaching aids
- Invitation of competent expertise
- Computers with internet
- Library and resource centre

12.3.2.5 References

1. Lee, R., & Nieman, D. (2012). *Nutritional Assessment: Sixth Edition* (6th ed., pp. 166-365). New York, NY: McGraw-Hill Higher Education.
2. Davies, J. (1997). *Hammond's Cooking Explained* (4th ed.). Harlow, England: Longman Publishing Group.

12.3.3 Learning Outcome 2: Assist client with meal selection

12.3.3.1 Learning activities

Learning activity	Special instructions.
i. Record and act upon client food preferences	➤ Consider factors influencing food choices
ii. Advise client on meal choices	➤ Plan meals as per clients' condition
iii. Assist client with menus marking, meal orders placement and/or meal selection	➤ Develop menus ➤ Take meal orders

12.3.3.2 Information Sheet

Factors Influencing Food Choices

Food choices are influenced by various factors, some of which are physiological, while others originate from our immediate environment. It is a complex process which changes as individuals go through several stages of the lifespan. These facts should be considered when planning meals from different individuals.

1. Biological determinants of food choice

Hunger and satiety: Hunger and satiety are controlled by the central nervous system. Humans will therefore respond to the feelings of hunger and satiety because the body needs energy and nutrients to carry out various physiological processes.

Palatability: Individuals desire a certain experience when having a meal, and this becomes a major determinant of food choice. A food's texture, aroma and appearance are the main properties of food that determine its palatability. This factor influences food intake in that it can cause an individual to consume larger portions of food and therefore increase their nutrient and energy intake. The aspect of palatability is a main consideration during diet planning.

Sensory aspects: Taste of food has a strong influence on food choice. Sensory characteristics of food are taste, smell, texture, all which determine food preference for individuals.

2. Economic and physical determinants of food choice

Cost and accessibility: Cost determines accessibility, which ultimately determines food intake and nutritional status. A person's socio-economic status determines their purchasing power and thus influences the quantity and quality of foods they consume. Individuals of low socio-economic status often choose low quality diets owing to financial constraints. However, there's no guarantee that people who have more money make better food choices. Knowledge of nutrition and health also play a key role in food choice.

Education and Knowledge: A person's education level determines their food behaviour. However, it is important to ensure that individuals get accurate and reliable nutrition information to avoid misleading myths, untrue claims and influence by nutrition quacks.

3. Social determinants of food choice

Influence of social class: Social class has a significant influence on individual food choice. This includes social class differences which determine challenges that people face in society. Social class also determines type of housing, access to clean water, sanitation and healthcare, all which are factors that influence a person's food choices

Cultural influences: Culture is simply defined as a people's way of life which includes their beliefs about food, food acquisition, food distribution and food avoidances. These have a strong impact on individual's food choice because they consider cultural acceptance when making food choice. Although culture resists change, it is a learnt behaviour and so it can be unlearned.

Social context: Individual food choice is influenced by the eating behaviour of others. Other people may influence an individual either directly, when buying the food, or indirectly where people learn from their peers. Our social environment can have a positive or negative influence on our food choices. People who are close to us, such as family and friends are a great source of support when we need to change bad food habits, which is helpful in behaviour change for better food choices.

Meal Planning

Meal planning can be defined as taking the time to plan nutritious meals and snacks for a specified time period.

Factors to consider when planning meals

1. **Nutritional Adequacy:** A meal should meet the nutritional needs of individuals, through provision of adequate energy and nutrients. All nutrients should be provided in adequate amounts. No one food should crowd the diet.
2. **Age:** People of different age groups prefer certain types of foods, cooking methods, portions and meal patterns. This is an important consideration when dealing with special groups such as infants and elderly people.
3. **Sex:** Males and females have different nutrient requirements as well as food preferences. This is an important consideration to make when planning a meal.
4. **Physical Activity:** Physical activity level of an individual determines their energy expenditure. This has a bearing on the types of foods and portions they are supposed to consume to meet the varied energy needs. More energy giving foods should be included in the diet of an individual who engages in intense physical activity while the opposite should be done for one who leads a sedentary lifestyle.
5. **Economic Considerations:** The amount of money available determines the types of food an individual can access. Nutritious food does not have to be expensive. Even with

just enough money, one should be able to select high quality foods which will meet the nutritional needs of individuals and households.

Meals for Various Groups

Energy requirements of people vary depending on sex, age and activity level.

a) Sex

The calorific requirement is generally higher in men than in women because men have larger body size, and they are more physically active and have more lean muscle mass.

b) Age groups

(i) Infants

Children under 1 year of age is referred as infants. Growth in the first year of life is more rapid than at any other time in the life cycle and adequate amount of energy and nutrients are required to support rapid growth and development and prevent nutritional inadequacies. A baby doubles its birth weight by 6 months of age and triples it within the first year of life. The energy, vitamin, mineral, protein and water requirements are higher per unit of body weight than any other age. Infants need all the vitamins and minerals that other humans need but in different amounts.

(ii) Children:

They grow at a slower rate than infants, however, their nutrient needs do not diminish. They need energy from food for daily physical activities and nutrients to promote growth and health. Appetite of children at this age is small and varied. Three main meals with nutritious snacks are needed in between to supply enough energy to meet their high activity level but small appetite.

Childhood obesity is common today. Obesity in children increases future risk of chronic disease such as high blood pressure, heart disease and may have social stigma. A balanced diet together with regular physical activity is necessary to prevent excessive weight gain. Regular exercise, healthy snacks and portion control are effective methods to maintain the healthy weight of children. Children should not be put on 'diet' as they are growing and the weight should be maintained during this growth period

(iii) Adolescents:

It is a period of rapid growth with great bodily changes. Bones grow and gain in density; muscle and fat tissues develop; and blood volume increases. Sexual maturity occurs when boys' voices change and girls experience the onset of menstruation. They have enormous appetite compared with children. Calorific requirements increase because of rapid growth

It is a period of growing independence and they become influenced by their peers and media. Eating habits can be affected by schedule of study, extracurricular activities, part-time jobs, social activities, the availability of nutritious food, and the lack of nutritional knowledge. Teachers, care-takers or parents could encourage healthy eating and healthy lifestyle tactfully by informing the adolescents of the nutritional needs, the appropriate choices of food and also by providing them with nutritious food/snacks at school/home. Sexual maturity and physical changes during puberty could be stressful to some adolescents. The over concern on weight and body image may predispose a teenager to

use unhealthy methods to control their weight. They may skip meals, choose very low energy diets, laxatives, diet drugs or purging. This can lead to serious health problems, nutrient deficiencies and eating disorders in later life.

(iv) Adults :

- Growth is usually completed by the age of 25. The aims of nutrition during adult years are to obtain adequate energy and nutrients to maintain a healthy body weight and prevention of chronic diseases through appropriate food choices.
- Adulthood is a period when an individual begins to experience and cope with numerous changes in the realms of work, family and education. Healthy eating and lifestyle are important for them to cope with stress and maintain health.
- The caloric requirement decreases as individual get older as physical activity reduces and physiological demands decrease.

(v) Elderly:

- Elderly people experience various changes that affect their food intake and utilization. These factors include, metabolic, psychological, musculoskeletal, gastrointestinal and dental changes.
- They may also lose their sense of taste and smell, which influences their appetite and food intake.
- The need for energy is decreased for the elderly, owing to the decrease in basal metabolic rate and activity level.

c) Invalids & convalescents:

- These are vulnerable groups of people because disease affects food intake, digestion, absorption and utilization. Also, drugs may affect nutrient utilization through drug and nutrient interaction. Foods must therefore be prepared with such factors in mind.
- Disease may also increase requirement for various nutrients to promote recovery. Such nutrients should be increased in the diet or supplemented when dietary sources are not sufficient.
- Illness may also lead to poor appetite and so , when planning a meal for such individuals, foods should be made appetizing to improve food intake.
- Convalescing individuals are slowly recovering from illness and may eventually be able to consume a normal diet. Portion sizes should be increased as the person improves recovery.

d) Pregnancy

- An expectant mother's nutritional status can affect the outcome of pregnancy. Nutrients are carried from mother's bloodstream through the placenta and umbilical cord into the baby's bloodstream and therefore the diet of a pregnant woman is important for a healthy baby and maintaining own health. The requirements for certain nutrients

increase during pregnancy. Energy and protein needs increase in order to sustain the development of fetus, placenta and the maternal tissue. Folate is required for correct development of the brain and nervous systems in the fetus. Vitamin B12 and iron are required for the synthesis of red blood cells and prevention of anemia. Vitamin C can enhance absorption of iron and help to form connective tissues. Zinc is involved in protein synthesis and cell development. An inadequate intake may affect fetal growth and is associated with low-birth weight infants. Besides, calcium, phosphorus and magnesium are essential for skeletal and dental growth.

- Meal planning for pregnant women could be based on the food pyramid for adults. A variety of foods should be chosen to achieve a balanced diet. The extra calories can be obtained from an additional serving from each of the following food groups – grains, vegetables, fruits and low-fat dairy products.
- Pregnant women may experience problems such as morning sickness, heartburn and constipation that affect the nutritional status. Hormonal changes cause nausea and vomiting of pregnancy. This can be relieved by small frequent meals, dry or cold foods (e.g. biscuits, toast, dry cereal, sandwiches, cold vermicelli etc.). Heartburn can be controlled by avoiding spicy or acidic foods. Adequate fluid and a high-fibre diet together with regular exercise can relieve constipation during pregnancy.
- Pregnant women are advised to avoid smoking and alcohol. Smoking increases risk of miscarriage, giving premature birth and low-birth weight baby. Heavy **alcohol** drinking could result in fetal alcohol syndrome (FAS) in infants and result in physical, cognitive and behavioural problems.

Planning Meals for Institutions

a) Prisoners

The quality and quantity of food available in a prison has a major influence on the quality of a prisoner's life. The availability of safe and healthy food is essential in maintaining and improving prisoners' health. Supporting and ensuring a safe and healthy food supply in prison will help to prevent diet-related diseases and promote better overall health of prisoners. Considerable benefits can be achieved when prison services work in a complementary manner to promote healthy lifestyles and facilitate healthy eating. These services include those for catering, education, health care, sports activities, treatment for substance users and activities of outside agencies.

Adequate nutrition should be considered one of prisoners' basic human rights, especially as many have poor health. Healthy, nutritious meals will enable them to take their medication properly and prevent the development of life-threatening infections such as HIV/AIDS and tuberculosis. Also, vulnerable population groups in prisons – such as pregnant and breastfeeding women, substance users, teenagers and elderly people – have specific dietary requirements.

b) Schools

School-going children have an increased demand for energy and nutrients. They need adequate energy and nutrients to support growth and development at this crucial stage in the lifespan.

Good feeding habits need to be inculcated at this age to help them make good food choices as they advance towards adolescence and adulthood.

A healthy diet during childhood and adolescence reduces the risk of nutritional problems in adulthood.

12.3.3.3 Self-Assessment

1. Outline the factors considered when planning meals
2. Outline considerations to make when planning meals for pregnant women
3. Which one of the following is not a social determinant of food choice?
 - a. Social class
 - b. Cultural influence
 - c. Social context
 - d. Cost
4. Indicate whether the following statements are true or false:
 - a. The requirements for certain nutrients increase during pregnancy
 - b. The need for energy is decreased for the elderly
 - c. Calorific requirement is generally higher in men than in women because men
 - d. People with little money cannot meet their nutritional needs

12.3.3.4 Tools, Equipment, Supplies and Materials

- Kitchen and service equipment
- Food pyramid
- Food composition table
- WHO guidelines
- MOH
- Ministry of Education
- Skills lab
- Use of LCDs, video clips, charts and other teaching aids
- Invitation of competent expertise
- Computers with internet
- Library and resource centre

12.3.3.5 References

Anderson A, et al. (2003). The development of and evaluation of a novel school-based intervention to increase fruit and vegetable intake in children (Five a Day The Bash Street Way), N09003. Report for the FSA, London

Anderson A & Cox D (2000). Five a day - challenges and achievements. *Nutrition and Food Science* 30(1):30-34.

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12.3.4 Learning Outcome 3: Formulate diet recipes and menu

12.3.4.1 Learning activities

Learning activity.	Special instructions.
i. Determine client daily nutrition requirement a. Factors that influence individual dietary requirements	➤ Calculate client daily requirement
ii. Guide client on appropriate menu a. Type of menus b. Categories of food groups	➤ Formulate various types of menu
iii. Select food ingredients	➤ Develop menu costing
iv. Prepare recipe	➤ Formulate recipes

12.3.4.2 Information Sheet

Definitions

Menu: is a list, in specific order, of the dishes to be served at a given meal. Menu is central to the food service concept—it defines the product offering, establishes key elements of financial viability namely price and contribution margin, and provides a powerful marketing tool.

Functions of the Menu:

A menu has the following functions:

- 1. Information:** It provides information on foods that are available , cooking methods and prices
- 2. Order:** It makes it easy for guests to understand because dishes are presented in an orderly manner.
- 3. Choice:** A menu gives the user freedom of choice to pick foods that they prefer and enjoy.
- 4. Image:** A menu represents the image of the institution, which is great for aesthetic purposes.
- 5. Sales:** Dishes can be made appealing through the menu and this improves sales.

In order for the menu to perform all these functions successfully, it must be informative, accurate, easy to understand, and well designed. Items mentioned on the menu should be available at all times and as per description since it is frustrating for a guest to make a decision only to be told that the dish is not available or to receive a dish that is not as stated.

Types of Menu:

Menus are broadly classified into several types:

They are as follows:

1. A la carte:

It is a list of all dishes on offer, which is within the resources of a particular kitchen. It means 'from the card'. An individual may select items to compose his/her own menu from it. The charge of meal will be the total of the prices of individual dishes served to the guest.

A la Carte

Italian Food Excellently Prepared In Our Scratch Kitchen

ENTRÉES

Prime Rib (Fri., Sat., & Sun.) Regular Cut	38.95	Veal Parmigiana	34.95
Prime Rib (Fri., Sat., & Sun.) Large Cut	48.95	Veal Piccata	32.95
Roast Beef (Top Sirloin)	27.95	Veal Scallopini with Fresh Mushrooms	32.95
Sweetbreads Saute with Mushrooms	29.95	Veal Scallopini Sec with Mushrooms	32.95
Eggplant Parmigiana	21.95	Calf's Liver Saute with Mushrooms	28.95
Breaded Veal Cutlet	30.95	Calf's Liver with Bacon or Onions	28.95
Veal Cutlet Milanese	32.95	Calf's Liver with Bacon & Onions	29.95

Choice of Steak Fries, Baked Potato, Spaghetti, Vegetables or Ravioli with above orders.

STEAKS & CHOPS

Hamburger Steak (16 oz.)	25.95	Special Top Sirloin (14 oz.)	28.95
Baby Back Ribs	24.95	New York Cut (14 oz.)	38.95
Pork Chops (One) 24.95 (Two) 32.95		New York Cut (18 oz.)	48.95
Lamb Chops (Two) 36.95 (Three) 46.95		Filet Mignon (8 oz.) 38.95 (12 oz.) 48.95	
Rib Steak (26 oz.)	48.95	Porter House Steak (30 oz.)	54.95
Kansas City N.Y. Strip (27 oz.)	48.95		

All Steaks with Broiled Prawns 12.95 extra.

All Steaks smothered with Fresh Mushrooms 6.95 extra.

We are proud to serve Certified Angus Steaks, aged and prepared in our own butcher shop.

CHICKEN

Half Charcoal Broiled Chicken	25.95
Charcoal Broiled Chicken Breasts	23.95
Chicken Liver Sautéed with Mushrooms	24.95
Chicken Piccata	25.95
Chicken Parmigiana	25.95
*Chicken Sec with Mushrooms	25.95
*Chicken Cacciatore	25.95

*Available with Chicken Breasts Only

SEAFOOD

*Calamari Steak	25.95
*Fillet of Sole	29.95
*Halibut (Broiled or Grilled)	36.95
*Salmon (Broiled or Grilled)	28.95
*Mahi Mahi (Broiled or Grilled)	28.95
Golden Fried Scallops	32.95
Sautéed Scallops (Lemon Capers Sauce)	36.95
Golden Fried or Broiled Prawns	29.95
Golden Fried Scallops & Prawns	32.95
Prawns Scampi	34.95

*Milanese Sauce with above items 3.95

Choice of Steak Fries, Baked Potato, Spaghetti, Vegetables or Ravioli with above orders.

PASTA

Spaghetti Pomodoro (Tomato Basil)	18.95	Fettuccine Alfredo	18.95
Spaghetti with Meat & Mushroom Sauce	18.95	with Smoked Ham & Peas	21.95
Ravioli or Cheese Ravioli	20.95	Pasta Primavera (Red or White Sauce)	21.95
Half Spaghetti & Half Ravioli	20.95	Linguine with Clams (Red or White Sauce)	25.95
Pasta al Olio	18.95	Fusilli with Chicken & Broccoli	25.95
Pesto with Pinenuts	18.95	Scampi with Linguine	29.95
Mostaccioli	18.95		

One Italian Sausage with Pasta Entrées Only 5.95 extra

One Meatball with Pasta Entrées Only 5.95 extra

Mushroom Sauce (to take out) Pint 7.95 Quart 14.95

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SALES TAX WILL BE ADDED TO THE PRICE OF ALL FOOD AND BEVERAGE SERVED AT TABLES.

A la carte Menu

2. Table d' hote:

It literally means 'from the host's table'. A meal is usually divided into various course and one has little or no choice.

Both a la carte and table d' hote menus are compiled to meet the requirement of the items to be served in the following meals by F&B outlets.

- i) **Breakfast /petit dejeuner:** Breakfast is the starting meal of the day and helps boost up the metabolism of the body.
- ii) **Brunch:** A meal had between breakfast and lunch.
- iii) **Elevenses/gouter:** A light meal usually had at mid-morning hours.
- iv) **Luncheon dejeuner:** It is a meal had during the daytime, ideally between 1 p.m. and 2 p.m.
- v) **Afternoon tea/high tea/le five o'clock:** It is a light meal, usually had between 4 p.m. and 5 p.m, where tea is served with light snacks.
- vi) **Cocktail:** In this meal small bites are served normally with beverages.
- vii) **Dinner/diner:** This is the main meal of the day eaten between 7 p.m. and 9 p.m. Many people prefer a light dinner, but for some people it is a lavish fare of wining and dining.
- viii) **Supper:** It is a less formal meal eaten before dinner.



Table d' hote

Recipe Development

Recipe: A standardized and tested procedure for preparing food, in which the ingredients to be used, their proportions, order of mixing and the time and temperature for cooking have all been worked out to produce a uniform and tasty product.

Components of a Recipe:

- The name of the dish.
- How much it will take to prepare the dish.
- Ingredients in required quantities or proportions.
- Equipment and environment needed to prepare the dish.
- Ordered list of preparation steps.
- The number of servings that the recipe will produce

12.3.4.3 Self-Assessment

1. Outline the functions of a menu
2. _____ is a list, in specific order, of the dishes to be served at a given meal
 - A. Main dish
 - B. Menu
 - C. Meal planning
 - D. Dish
3. Which one of the following is not a component of a recipe:
 - A. The name of the dish.
 - B. Ingredients in required quantities or proportions.
 - C. Price of the end product
 - D. Preparation steps.
4. _____ is a type of menu with a list of all dishes on offer and an individual may select items to compose his/her own menu from it
 - A. A la carte
 - B. Cocktail
 - C. Table d' hote
 - D. Brunch

5. _____ a meal where small bites are served normally with beverages.
- A. Buffet
 - B. Cocktail
 - C. Luncheon
 - D. Dinner
6. Which one of the following is not true about a menu:
- A. It provides information on foods that are available , cooking methods and prices
 - B. It makes it easy for guests to understand because dishes are presented in an orderly manner.
 - C. A menu shows the sales made over the period of time
 - D. A menu represents the image of the institution, which is great for aesthetic purposes.

12.3.4.4 Tools, Equipment, Supplies and Materials

- Recipes
- Stationery
- Food charts
- Calculator
- WHO guidelines
- MOH guidelines
- Ministry of Education
- Skills lab
- Use of LCDs, video clips, charts and other teaching aids
- Invitation of competent expertise
- Computers with internet
- Library and resource centre

12.3.4.5 References

Estes, R. (2018). *The Recipe Development Guide: The Complete Recipe and Cook Book Development Tool*. Independently Published.

12.3.5 Learning Outcome 4: Prepare formulated meals

12.3.5.1 Learning activity

Learning activity	Special instructions.
i. Obtain recipe and select ingredients a. Review categories of recipes	➤ Categorize meal courses
ii. Obtain selected ingredients as per client need a. Review guide to selecting quality produce	➤ Prepare for a meal ➤ Purchase ingredients as per budget ➤ Choose quality ingredients
iii. Prepare meal as per menu a. Review food preparation methods	➤ Prepare and serve meals

12.3.5.2 Information Sheet

Definitions

Meal course: A set of food items served at the same time. A meal may contain several meal courses

A full course meal: A meal consisting of three or more courses

Factors to Consider While Planning a Menu

- 1. Operations hour:** Consider the operation hours of the establishment/facility so as to ensure efficiency in production and service.
- 2. What to serve:** Dishes to be served should be acceptable and in line with the establishment's culture
- 3. Production process:** Consider the production process adopted by the establishment. This can be cook-chill, cook-freeze, and sous-vide
- 4. Use of convenience products:** A menu will be affected by the use of convenience foods, seeing as some are in ready-to-eat forms.
- 5. Style of service:** The style of service is an important consideration to make. This helps to ensure smooth flow of food items during meal service.

Types of Food Service

There are five different types of service

1. Waiter service

It is also known as sit-down service. In this type of service, a waiter takes the orders, serves the food and takes care of the payment process too while guests remain seated.

Benefits:

- Since diners are served directly, service provision is more personalized.

Challenges:

- It requires skilled staff because it involves complex processes such as taking and remembering orders and observing principles of meal service
- Miscommunication is a common challenge, which can lead to serving wrong orders to guests.

2. Chinese banquet service

A waiter serves a table or group of tables with about 10-12 guests, where dishes can be communal and shared.

Benefits:

- Sharing dishes gives a homely experience and makes the guests feel more relaxed
- Food is usually pre-ordered, making work easier for the waiters since they don't have to remember orders.

Challenges:

- It is costly in terms of labour because a large number of skilled staff is needed to serve different tables at the same time.
- It is quite tasking to coordinate because all food has to be served fresh at the same time.

3. Buffet service:

Guests choose their food from a wide selection on the buffet line. Types of buffet service include:

- **Simple buffet:** Guests pick food from a buffet line while waiters clear tables and serve minor requests.
- **Station-type buffet:** Beverages are served at the table while guests get their food from the buffet line.
- **Modified deluxe buffet:** Waiters serve beverages and dessert while guests get their food from the buffet line. Tables are set with cutlery beforehand.
- **Deluxe buffet:** Waiters only serve appetisers, soup and/or salads but guests get the other dishes from the buffet line.

Benefits;

- The tables are easy to prepare
- Makes work easier for waiters because they only serve a few dishes and clear the tables.

Challenges

- Time and resources are limited, so it is difficult to make special requests
- Diners may feel alienated because there's less interaction with the waiters

4. Self-service

Diners place, pay and pick up their orders at a counter similar to fast casual and fast food establishments.

Benefits:

- Waiters have less work because they only need to stay behind the station counter to take orders.

Challenges:

- It requires skilled labour for fast and prompt service.
- Can be tiring during rush hours

5. Semi-self service

Similar to self-service, diners order and pay for their orders at the counter but their food is served to them when ready.

Benefits:

- Waiters only need to stay at the counter to take orders and receive payment.
- Services have an easier time delivering orders because diners are identified via a number system.

Challenges:

- Food has to be prepared promptly as quick service is expected.
- Rush hours can be tiring and even more challenging

12.3.5.3 Self-Assessment

1. Explain the advantages and challenges of using the following food service methods:
 - A. Chinese banquet service
 - B. Buffet service
 - C. Self-service

2. Explain factors to consider when planning a menu
3. _____ a set of food items served at the same time. A meal may contain several meal courses
 - A. Dish
 - B. Meal course
 - C. Recipe
 - D. Diet
4. Indicate whether the following statements are true or false
 - A. In simple buffet, beverages are served at the table while guests get their food from the buffet line.
 - B. Meal service where guests pick food from a buffet line while waiters clear tables and serve minor requests is called station-type buffet:
 - C. In modified deluxe buffet, waiters serve beverages and dessert while guests get their food from the buffet line. Tables are set with cutlery beforehand.
 - D. In deluxe buffet, waiters only serve appetisers, soup and/or salads but guests get the other dishes from the buffet line

12.3.5.4 Tools, Equipment, Supplies and Materials

- Kitchen equipment
- WHO guidelines
- MOH guidelines
- Ministry of Education
- Skills lab
- Use of LCDs, video clips, charts and other teaching aids
- Invitation of competent expertise
- Computers with internet
- Library and resource centre

12.3.5.5 References

Davis, B., Lockwood, A., Alcott, P., & Pantelidis, I. S. (2018). *Food and beverage management*. Routledge.

12.3.6 Learning Outcome 5: **Asses food safety and hygiene**

12.3.6.1 *Leaning activities*

Leaning activity	Special instructions.
i. Prepare nutrition support services	➤ Assign responsibilities in hygiene maintenance
ii. Identify processes and practices that are not consistent with the food safety program a. Review HACCP programme	<ul style="list-style-type: none"> ➤ Supervise individuals in food handling ➤ Check condition of food production and service equipment ➤ Assess knowledge and skills for staff in food production areas ➤ Observe food safety measures ➤ Read and interpret time-temperature logs in food production areas
iii. Take corrective action a. Review HACCP programme	<ul style="list-style-type: none"> ➤ Monitor food handling chain ➤ Document discrepancies for corrective action ➤ Implement appropriate corrective measures
iv. Supply nutrition support information or items	<ul style="list-style-type: none"> ➤ Prepare foods in hygienic conditions ➤ Educate relevant persons on food hygiene practices
v. Identify personal hygiene requirements of the food safety program	<ul style="list-style-type: none"> ➤ Keep short nails ➤ Cover hair while in food production areas ➤ Observe proper handwashing procedures ➤ Wear appropriate gear
vi. Report health conditions and/or illness a. Identify types of food borne illnesses	<ul style="list-style-type: none"> ➤ Assess health of people in food handling areas ➤ Observe signs of food borne illnesses ➤ Apply relevant measures to prevent food borne illnesses
vii. Wear PPEs for food handling tasks a. Identify types of PPEs	<ul style="list-style-type: none"> ➤ Choose appropriate PPEs for tasks assigned ➤ Clean and store PPEs appropriately

12.3.6.2 Information Sheet

Food hygiene: Food hygiene refers to all measures taken to ensure food is safe from contamination

It is the responsibility of all people in the food industry from cleaners to managers. As a result, all individuals concerned with food hygiene must practice great care when preparing or handling food to avoid irrelevant wastage of food due to contamination or spoilage by mould, vermin, bacteria or physical damage. Furthermore, many people perceive food hygiene as mere common sense where they aim to do the correct thing and they do not intend to poison anyone. However, while working in the food industry, one must consider various important issues pertaining their kitchen and personal hygiene.

Good hygiene involves – preventing the escalation of infection by individuals who handle food by ensuring that food preparation surfaces, equipment and areas are clean.

Aims of food hygiene

- To protect food from being contaminated
- To prevent bacteria from accumulating to levels that can cause ill-health
- To destroy bacteria in food through sufficient processing or cooking

The benefit of food hygiene

- Compliance with set regulations
- Good reputation
- Enhanced business through customer satisfaction
- Good working environment for employee improved job satisfaction and staff morale
- Improved food quality and increased lifespan for food

The cost of poor hygiene

- Pest contamination
- Poor reputation through media exposure and word of mouth
- Costly fines and legal actions by people suffering from food poisoning
- Outbreaks resulting from food poisoning and sometimes death
- Loss of goods due to spoilage
- Business termination by local health bodies

Sources of contamination

- Clothes
- Pests and flies
- People – (skin, anus, nose, mouth, hands)
- Uncooked food – (specially water, vegetables, seafood, chicken, red meat)

- Utensils – (contaminated utensils specially ones used for raw then cooked food without enough sanitizing and cleaning in between, tea towels)
- Trash

Personal Hygiene Rules

- Fingernails

Individual preparing or serving food should ensure that they have clean and short nails, and should not have no false nails or nails with vanish

- Gloves

Before wearing gloves, one should ensure that his/her hands are washed and dried. Once put on, a pair of gloves should not be used for more than one task.

- Hair

Long hair should be tied back with a ribbon or kept back with a hat or a hair net

- Protective clothing

Attendants handling cooked food, prepared salads and soft cheese should not travel to and from their place of work wearing their protective clothing. Instead, they should put on their work clothes on site.

Staff should not;

- Cough or sneeze near food
- Scratch
- Use or smoke tobacco within the kitchen area
- Taste any food by using dirty spoon or dipping their finger in it
- Have their breaks in food handling and processing areas
- Put on plain band type rings, wear limited jewellery and plain sleeper style earrings

Kitchen Hygiene Layout

Food Premises

The design, layout and structure of food premises and the provision of essential services, facilities and equipment must meet the required legal requirements of recent laws as well as the industry guidance. In addition, laws are not limited to building but also delivery vehicles, market stalls and other moveable structures. Overall, food premises can be taken to mean;

- Cafes
- Buffet Car On Trains
- Delivery Vehicle
- Warehouses

- Supermarkets
- Staff Canteens
- Shops
- Restaurants
- Market And Other Stalls
- Kitchen Offices
- Hotels
- Hotdog And Ice Cream Vans
- Guest Houses

Physical standard of the premise

Legislations desire that the design, layout, size and construction of food premises should allow for efficient cleaning. Below are points to take into consideration;

a) Construction

This is exclusive of any substance that may add harmful material to food either through vapor or through direct contact

b) Ceilings

High level surfaces and ceilings should not have any finishes that may result in particles being shed such as plaster, fibers or flaking paint. In addition, they should be fire, steam and heat resistant.

c) Condensation

Business owners should take into consideration to places in food preparation sections where humidity and steam are produced in order to limit condensation from building up

d) Changing facilities/rooms for staff responsible for handling food should be provided with secure place where they can change from and store their personal possessions and clothes. As a result, employees will not expected to change in toilet area or other sanitary conveniences

Delivery of supplies

Measures should be in place to audit the quality and quantity all supplies received. It is essential to look for signs of poor quality such as rotten or mouldy products. Furthermore, perishable goods should be marked and stored directly to keep the kitchen organized and to ensure that it remains at safe temperatures. Labelling incoming food supplies and creating specific shelf life charts that can be hung in food preparation areas is important because it enables employees to have easy and quick reference when sorting food items.

Drainage system

Drainage should be designed to enable solid and liquid waste to flow away from food preparation area.

Electrical socket and switches

The premise should have enough number of electrical sockets outlet that help to eliminate the necessity for extension leads and long cable runs. Additionally, switches and fittings should not be set within two meters or exposed to water unless they are water resistant.

Floor and walls

Floors should be durable, slip resistant and have the ability to tolerate the spillage of hot liquids and impact damage. This applies to walls, which should also be steam and heat resistant.

Food waste and disposal

Food waste should not be unavoidably be allowed to pile up in sections where food is prepared. Rather, it should be removed at the end of each working day. Bins with lids and lined with plastic refuse are ideal for internal use. On the other hand, bulk storage for external use should be in the form of wheeled covered skips.

Food storage areas

- Food should be stored above floor levels to ensure easy cleaning and pest control. On the other hand, dry food substances and vegetables area should be maintained in good state and with adequate ventilation to provide dry and cool conditions with an air temperature ranging between 10°C to 25°C. All food items should be adequately rotated by ensuring that all incoming stocks are stored behind those already in refrigeration or storage units.
- Raw and cooked food should be kept separate
- All storages areas should be kept clean, sanitary and free from debris or trash

Interior surfaces

Interior surfaces should be resistant to formation of mould and be finished in a way that will ensure that they do not shred debris or flake

Lighting

Premises should have suitable and adequate natural or artificial glare lighting to ensure proper cleaning, safe food handling and the right monitoring of standards

Mobile equipment

Catering equipment should be made movable to ensure they are correctly disinfected and protected against accumulation of dirt, formation of moulds or condensation on surfaces or getting into contact with toxic material.

Refrigerators

Refrigerators should have temperature display on the outside casing and an internal thermometer. To ensure that the unit is functioning effectively, readings on both the fridge and freezer should be periodically monitored. Furthermore, fridge doors should only be opened when necessary and it must not be overloaded.

Space

In any premises where food prepared, cooked and served, there is need to include enough space for all related practices expected to take place.

Toilets

Staff should be provided with enough flush lavatories. The recommended number is one toilet for every five employees. Offensive and aerosol odors may be prevented from getting into food preparation areas by ensuring the premise is well ventilated through mechanical or natural ventilations. Additionally, toilets should not lead directly to areas where food is handled, prepared or served. Hence;

- All toilet facilities should be cleaned daily and in good state of repair
- Signs should be placed in toilet to advise staff to wash their hands

Wash Basins

Staff members should be provided with enough number of washbasins with cold and running water. These should be placed in the appropriate locations such as food preparation areas or close to toilets. The staff should also be provided with paper towels or warm hand driers and soap (or similar). Temperature for hot tap water should be between 50 and 60 degree C.

Worktop

Worktop should be made of material that is non-toxic, smooth, non-reactive to food ingredients.

Wood

If possible, wood should be avoided in food hygiene premises. However, it may be used for shelves if its surface is free of imperfections and it is sealed with paint or varnish to make it fully washable.

HACCP

Hazards Analysis and Critical Control Points (HACCP) is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product". HACCP is designed for use in all segments of the food industry from growing, harvesting, processing, manufacturing, distributing, and merchandising to preparing food for consumption. It is the means of securing food safety from harvesting to consumption. Tool to identify the hazards and applying the major for the food safety. HACCP can be applied in every step of food processing.



Principles of HACCP

Principles of HACCP

1. **Assessing the Hazards:** Hazards are assessed at each step in the flow of food throughout an operation.
2. **Identifying Critical Control Points (CCPs):** A CCP is a point, step or procedure at which *control can be applied* and a food safety hazard can be *prevented, eliminated, or reduced* to acceptable levels. This step involves identification of CCPs regarding hygiene, avoiding cross contamination, temperatures and procedures for cooking and cooling.
3. **Establish critical limits;** Setting up control procedures and standards for critical control points. Establish *standards (criteria) for each CCP* and measurable procedures such as:
 - specific times and temperatures
 - Moisture level
 - PH level
 - Observable procedures such as hand washing
4. **Monitoring critical control points:** Checking to see if criteria are met is one of the most crucial steps in the process. E.g Assigning an employee to monitor temperatures of storage, cooking, holding and cooling are necessary to see if standards are met.
5. **Taking corrective action:** Observe if there's a deviation between actual and expected results. Correct the procedures by using an alternate plan if a deficiency or a high-risk situation is identified in using the original procedure. This may be accomplished by a trained employee empowered to initiate corrective action without a supervisor being present.

6. Establish record-keeping and documentation procedures

Records maintained should have the records or information regarding HACCP plan, CCP, critical limits, monitoring, corrective action, all the procedures including the verification procedures. Recording keeping is necessary of validation and proper application of HACCP.

7. **Establish verification procedures:** HACCP plan must be validated. For testing the validity of the plan several steps can be taken such as checking out the random samples, reviewing the process, confirming that the CCP are under control. Verification activities can be carried out by the external hired officers or the internal members.

Benefits of HACCP:

- Ensures the consumer regarding the safety of the product
- Prioritizes food safety and works to eliminate any kind of hazard
- Necessary for the consistent quality products
- Provides the framework to produce foods safely and to prove they were produced safely.
- Prevents from the possible health outcomes that could have occurred due to mishandling during food production steps
- HACCP is also necessary for obtaining validation.

12.3.6.3 Self-Assessment

1. Discuss the costs of poor food hygiene
2. Discuss the Hazards Analysis and Critical Control Points(HACCP)
3. Discuss the personal hygiene rules and regulations
4. List the sources of food contaminants
5. _____ is a point, step or procedure at which control can be applied and a food safety hazard can be prevented, eliminated, or reduced to acceptable levels
 - a. Food hygiene
 - b. Critical control point
 - c. Food contamination
 - d. Deviation
6. _____ refers to all measures taken to ensure food is safe from contamination
 - a. Cross-contamination
 - b. Hand washing
 - c. Food hygiene
 - d. Corrective measure

7. Indicate whether the following statements are true or false
- a. Raw and cooked food should be stored together in a clean dry place
 - b. Catering equipment should not be movable
 - c. Worktop should be made of material that is non-toxic, smooth, non-reactive to food ingredients
 - d. Drainage should be designed to enable solid and liquid waste to flow away from food preparation area

12.3.6.4 Tools, Equipment, Supplies and Materials

- PPEs
- Disinfectants
- Stationery
- Fumigants
- Kitchen plan/lay out
- WHO guidelines
- MOH guidelines
- Ministry of Education
- Skills lab
- Use of LCDs, video clips, charts and other teaching aids
- Invitation of competent expertise
- Computers with internet
- Library and resource centre

12.3.6.5 References

Vaclavik, V., & Christian, E. W. (2003). *Essentials of Food Science*. New York, NY: Henry Holt and Company.

Karel, M., & Lund, D. B. (1975). *Principles of food science*. O. R. Fennema (Ed.). New York: Dekker.

Pierson, M. D. (2012). *HACCP: principles and applications*. Springer Science & Business Media.

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12.3.7 Learning Outcome 6: Document meal planning and management

12.3.7.1 Learning activities

Learning activity	Special instructions.
1. Avail registers	<ul style="list-style-type: none">Record meal plansMaintain meal plan records
2. Avail dietary regime	<ul style="list-style-type: none">Document dietary regime
3. Maintain patient file	<ul style="list-style-type: none">Record dietary modifications on patient fileCollaborate with other disciplines

12.3.7.2 Information Sheet

Record keeping: a permanent written communication that documents information relevant to meal planning and service

Food production records: written records of types and amounts of all food prepared and used on a given day for a certain number of children and adults and required worksheets that demonstrate that meals planned have been prepared and served.

Keeping good records of the meals prepared and served each day is part of any successful food service operation. Records are a valuable written history of site operation and can be used for future reference when menu planning.

Importance of keeping meal records

- Planning Tool
- Communication Tool with staff
- Written History of actual quantities prepared
- Required by regulation
- Demonstrates compliance

Daily Food Production Records

Production records are documentation of the type and amount of food produced for meals. They are also a planning tool.

Daily food production records should include the following:

- Menu item
- Recipe number/code
- Portion size

- Number of portions planned.
- Quantity of food used
- Cooking time/temp
- Serving time/temp
- Actual number of portions prepared.
- Actual number of portions served.
- Leftovers

12.3.7.3 Self-Assessment

1. List the components of a daily food production record
2. _____ are written records of types and amounts of all food prepared and used on a given day for a certain number of children and adults and required worksheets that demonstrate that meals planned have been prepared and served
 - A. Menu
 - B. Recipe
 - C. Food production records
 - D. Meal plan
3. Indicate whether the following statements are true or false about keeping meal records
 - A. Records are a planning tool
 - B. Meal records are a communication tool with staff
 - C. They show a written history of actual quantities prepared
 - D. Required by regulation and demonstrate compliance

12.3.7.4 Tools, Equipment, Supplies and Materials

- Food record samples
- Stationery
- Inventory registers
- WHO guidelines
- MOH
- Ministry of Education
- Skills lab
- Use of LCDs, video clips, charts and other teaching aids

- Invitation of competent expertise
- Computers with internet
- Library and resource centre

12.3.7.1 References

Bantin, P. C. (2008). *Understanding data and information systems for recordkeeping*. Neal-Schuman Publishers.

www.eamnutrition.usda.gov

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