

CBSE | DEPARTMENT OF SKILL EDUCATION

CURRICULUM FOR SESSION 2020-2021

FOOD, NUTRITION & DIETETICS (Sub. Code - 834)

JOB ROLE: DIET ASSISTANT

CLASS – XI & XII

COURSE OVERVIEW:

The discipline of nutrition empowers learners to develop an understanding of the concept, principles of nutrition which will enable them to make the best possible choices of food for meeting the nutritional needs of self, family and community at large. It is so designed to help learners understand the concept of food and nutrition security and create an awareness regarding major public health/nutrition problems affecting vulnerable sections of the society and strategies, programmes, policies enacted by the Government for combating these problems. Further the course will focus on study about the concept, scope, need, importance and process of nutrition education. Yet another focus of the discipline is to provide knowledge to learners for nutritional therapy and counseling service for the purpose of disease management. Creating awareness towards food safety and quality control measures, laws and policies is another important focus.

The syllabus will help learners develop knowledge and skills in this area. This would make them competent to meet challenges of becoming a responsible citizen and effective nutrition educator.

OBJECTIVES OF THE COURSE:

The objectives of the course are to:

- To help students recognize that food is a basic requirement of life.
- Describe basic food preparation techniques.
- Identify the physical, chemical, and/or microbiological changes in food caused by heat, enzymes, changes in pH, freezing, incorporation of air, and mechanical manipulation.
- Understand food quality.
- Learn fundamentals of modifying recipes to meet current nutrition recommendations for fat, cholesterol, fiber, etc. without sacrificing flavor or appearance.
- Learn to find credible sources of information re. food science and nutrition.
- Identify sources and functions of carbohydrates, proteins, fats, alcohol, vitamins, minerals, and water in the human body.

- Demonstrate the importance of a balanced diet and use tools that can be utilized to evaluate the nutritional adequacy of a diet Identify the relationship between diet and chronic diseases/illnesses (cardiovascular disease, diabetes, obesity, cancer, hypertension, osteoporosis, etc.) and what modifications can be made in the diet to reduce the risk for these diseases/illnesses.
- Be able to read and interpret a nutrition label.
- Utilize nutrition terminology and related terminology appropriately.
- Demonstrate lifelong healthful eating habits by differentiating between beneficial and non-beneficial dietary practices

SALIENT FEATURES:

- The syllabus of nutrition at Senior Secondary level develops an understanding in the learners that the knowledge and skills acquired through the study of nutrition facilitates development of good health and well-being for self, family and community. It endeavors to –Acquaint learners with the basics of food, nutrition, health, fitness and food safety and quality control.
- Sensitize learners to the common nutritional disorders effecting vulnerable groups in our country and strategies to manage them.
- Impart knowledge of nutrition and lifestyles to enable prevention and management of diseases.
- Develop skills of communication to assist in advocacy and dissemination of knowledge to community.
- Enable learners to become alert and aware consumers, and inculcate healthy food habits.

LIST OF EQUIPMENT AND MATERIALS:

The list given below is suggestive and an exhaustive list should be prepared by the vocational teacher. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

Teaching/Training Aids:

- 1) Computer
- 2) LCD Projector
- 3) Projection Screen
- 4) White/Black Boards
- 5) Flip Charts
- 6) Video and audio recorders

CAREER OPPORTUNITIES:

The students will acquire a job with a low stress level, good work-life balance and solid prospects to improve and get promoted to higher levels of recognition.

- Hospitals
- Research institutes
- Community sectors
- Health & Wellness centre
- Education sector
- Hospitality sector

VERTICAL MOBILITY:

At B.S. level, students may start their career as a Dietitian and they can reach at higher level over the period of time by pursuing master degree and PhD. For the career progression, following career options are available in the field of nutrition:

- Dietitian-Clinical/Community/Public Health/Research
- Teaching/Research scholar
- Food service manager
- Animal nutritionist
- Health promotion specialist
- International aid/Development worker
- Health & Wellness coach

CURRICULUM:

This course is a planned sequence of instructions consisting of Units meant for developing employability and Skills competencies of students of Class XI and XII opting for Skills subject along with other subjects.

CLASS –XI (SESSION 2020-2021)

Total Marks: 100 (Theory - 70 + Practical - 30)

FOOD, NUTRITION & DIETETICS (Subject Code - 834) Class XI (Session 2020-21)

	UNITS	NO. OF HOURS for Theory and Practical	MAX. MARKS for Theory and Practical
Part A	Employability Skills		
	Unit 1 : Communication Skills-III	13	10
	Unit 2 : Self-Management Skills-III	07	
	Unit 3 : ICT Skills-III	13	
	Unit 4 : Entrepreneurial Skills-III	10	
	Unit 5 : Green Skills-III	07	
	Total	50	
Part B	Subject Specific Skills		
	Unit 1: Food and Nutrition: Basic Concepts	15	10
	Unit 2: Nutrition through the Life Cycle	25	15
	Unit 3: Public Health and Nutrition: Basic Concept	15	10
	Unit 4: Public Health and Nutrition Disorders	25	15
	Unit 5 : Public Health and Nutrition: Programmes and Policies	7	05
	Unit 6: Nutrition Education, Communication and Behaviour Change	8	05
	Total	95	60
Part C	Practical Work		
	Viva based on Project	55	5
	Practical File / Power Point presentation		10
	Demonstration of skill competency via Lab Activities		15
	Total		55
	GRAND TOTAL	200	100

NOTE: For Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

DETAILED CURRICULUM FOR CLASS XI

PART A - EMPLOYABILITY SKILLS:

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-III	13
2.	Unit 2: Self-management Skills-III	07
3.	Unit 3: Information and Communication Technology Skills-III	13
4.	Unit 4: Entrepreneurial Skills-III	10
5.	Unit 5: Green Skills-III	07
	TOTAL DURATION	50

PART B - SUBJECT SPECIFIC SKILLS:

Unit 1: Food and Nutrition: Basic Concepts

- Food, Nutrition, Health, Primary Health Care and Nutritional Status (Definition, Inter relationship in maintaining good health and well-being)
- Food (Functions and Constituents of food –Nutrient and Food Groups : Basic concepts
- Nutrients: Functions, Sources, Digestion, Absorption, Utilization and Requirements
- Recommended Dietary allowances and RDA for Indians (ICMR 2010) and their uses in planning diets.
- Concepts of meal planning, factors affecting meal planning, and Balanced diet (concept and guidelines in planning balanced diets)

Unit 2: Nutrition through the Life Cycle

- Nutrition during Infancy (0-1years) and Preschool years (1-6 years): Infancy, preschool period (critical from Growth, development view point, nutrient requirements- Infant and Young \Child Feeding practices, planning balanced diet for infants, preschoolers and special considerations for feeding young children.
- Nutrition during Childhood and Adolescent: Growth, Development, Nutrient needs, meeting nutrient needs through planning balanced diets, packed lunches factors influencing food and nutrient needs during adolescence (peer pressure, body image, media, stress, fasting)
- Nutrition during Adulthood and Old Age: Factors influencing nutritional requirements (age, gender, activity level-sedentary, moderate, heavy) Nutrient needs (RDA) and meeting requirement by planning balanced diets.

- Nutrition during pregnancy and lactation: Understanding why pregnancy and lactation are critical from nutritional point of view, recommended dietary allowances and planning balanced diets. Special considerations in pregnancy-nausea, vomiting, heart burn, constipation)

Unit 3: Public Health and Nutrition: Basic Concept:

- Human Development Index (HDI), Sustainable Developmental Goals (SDG) : Basic Concepts
- Malnutrition (Under-nutrition/ Over-nutrition): Concept/definition, causes (conceptual framework by UNICEF)), consequences
- Methods for assessment of nutritional status (Direct methods –Anthropometry, Biochemical, Clinical, Dietary survey: Basic concept)

Unit 4: Public Health and Nutrition Disorders:

- Major Deficiency Disorders: (PEM in the context of underweight, stunting, wasting, SAM; Nutritional Anaemia with special reference to Iron Deficiency Anaemia; Vitamin A Deficiency (Xerophthalmia); Iodine Deficiency Disorders; Zinc deficiency: Prevalence, Causes, Consequences and its control.
- Other Nutritional Problems: Vitamin B complex deficiencies, vitamin C deficiency, Vitamin D deficiencies.
- Overweight/Obesity: Definition/Classification (WHO), Causes and Consequences.
- Non Communicable Diseases (Diabetes, CVD, cancer): Concept, Prevalence, Causes (Behavioural) and Consequences

Unit 5: Public Health and Nutrition: Programmes and Policies:

- National programme for welfare of women & Children :objectives, beneficiaries, functions/ components) (ICDS, Midday meals)
- Programmes for welfare of Adolescent girls and Women (Rashtriya Kishore Swasthya Karyakram (RKSK),Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA), Indira Gandhi Maitritva Sahyog Yagna (IGMSY)

Unit 6: Nutrition Education, Communication and Behaviour Change:

- Information, Education and Communication (IEC) for Behaviour Change: Definition, Nutrition Education: Need, Scope and Importance
- Process of nutrition education communication
- Nutrition Communication: Media and Multi-Media combinations: Types (Interpersonal communication: Individual and group approach; Mass Media, Traditional Media)

PRACTICAL GUIDELINES FOR CLASS XI

Assessment of performance:

In In class XI – Two examiners (internal examiner only) assigned for the conduct and assessment of Practical Examinations each in Senior Secondary School Curriculum Question for the viva examinations should be conducted by the internal examiners. Question to be more of General nature, project work or the curriculum. Investigatory Project especially those that show considerable amount of effort and originality, on the part of the student, should get suitable high marks, while project of a routine or stereotyped nature should only receive MEDIOCRE marks.

Procedure for Assessment of practical project work: (Total 30 marks):

- For students of Class XI projects has been emerging as a very interesting but sometimes challenging. It enhances understandability, creativity and innovativeness. It also improves presentation and communication skills. Keeping this in mind following guidelines have been framed to bring about uniformity and reward
- Creative skills among students. Students can prepare a Project Report on Operating Costing or Service Costing of any organization viz., transport, hotel, canteen or any other service organization on the basis of their understandability and class room knowledge. They may get the guidance from their respective teacher in order to boost their skill and knowledge. The Project should be the sole work of student.
- The mark for the project report will be assessed by the subject teachers, through, a well-planned rubric, keeping in view the core content, quality of the project and Organization of data.
- To improve students' presentation skills, it is suggested that the students should be trained to present the final project. The concerned teacher and the students should visit to some Industry or service sector in order to understand knowhow of the business sector. Visiting to Industry or service sectors will enhance their knowledge and improve their skills & understanding.

Viva based on Project - 05 marks:

The teacher conducting the final practical examination should ask verbal questions related to the project. If no project has been assigned /made by the students, viva must be based on subject as per the Curriculum only.

Project Report – 25 marks:

List of Practical's-

1. Plan a balanced meal for
 - a. Infant (0-1yrs)
 - b. Child (1-6yrs)
2. Preparation of Immunization schedule.
3. Prepare an interview schedule and interview working mothers for substitute care.
4. Plan a balanced meal for-

- a. Adolescent
 - b. Old age
5. Make a list of foods available in the local market according to food groups.
 6. Plan a balanced meal for -
 - a. Pregnant women
 - b. Lactating women
 7. Identify the problems of adjustments of adolescents (group activity).
 8. Spend a day with an aged person and observe the needs and problems. Write a report (visit to old age home).
 9. Critically evaluate any one-activity center near your house and suggest improvements.
 10. Prepare a nutritious meal using different cooking methods.
 11. To study the nutritional intake and its effect on the nutritional status of a family by maintaining a food diary.
 12. Demonstration on "How to make hand sanitizer at home".
 13. Prepare a flowchart of a game to inculcate healthy eating habits for infants, children.
 14. Enlist from the common foods we consume, five rich sources each of energy, protein, calcium, iron, vitamin A, Thiamine and vitamin C.
 15. Calculate the nutrient content per 100gm of the edible foodstuff using ICMR book
 16. Critically evaluate mid-day meal given in your institution and suggest improvements.
 17. Enlist the deficiency diseases caused by lack of intake of these nutrients.
 18. Frame five slogans to promote healthy food and discourage junk food among children. (Class 1 to Class 5).

PARAMETERS	MARKS
I) Prepare Project Report based on content, investigation, originality and compilation	25
Viva (Based on Curriculum)	05
TOTAL	30

CLASS – XII (SESSION 2020-2021)

Total Marks: 100 (Theory - 70 + Practical - 30)

FOOD, NUTRITION & DIETETICS (Subject Code - 834) Class XII (Session 2020-21)

	UNITS	NO. OF HOURS for Theory and Practical	MAX. MARKS for Theory and Practical
Part A	Employability Skills		
	Unit 1 : Communication Skills-IV	13	10
	Unit 2 : Self-Management Skills- IV	07	
	Unit 3 : ICT Skills- IV	13	
	Unit 4 : Entrepreneurial Skills- IV	10	
	Unit 5 : Green Skills- IV	07	
	Total	50	
Part B	Subject Specific Skills		
	Unit 1: Clinical and Therapeutic Nutrition	25	15
	Unit 2: Diet in Health and Disease: cause, physiological conditions, clinical symptoms and dietary management	25	15
	Unit 3: Diet in Health and Disease - II	25	15
	Unit 4: Food Safety and Quality Control	20	15
	Total	95	60
Part C	Practical Work		
	Viva based on Project	55	5
	Practical File / Power Point presentation		10
	Demonstration of skill competency via Lab Activities		15
	Total		55
	GRAND TOTAL	200	100

NOTE: For Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

DETAILED CURRICULUM FOR CLASS XII

PART A - EMPLOYABILITY SKILLS:

S. No.	Units	Duration (in Hours)
1.	Unit 1: Communication Skills- IV	13
2.	Unit 2: Self-management Skills- IV	07
3.	Unit 3: Information and Communication Technology Skills-IV	13
4.	Unit 4: Entrepreneurial Skills- IV	10
5.	Unit 5: Green Skills- IV	07
	TOTAL DURATION	50

PART B - SUBJECT SPECIFIC SKILLS:

Unit 1: Clinical and Therapeutic Nutrition:

- Therapeutic Nutrition:
- Introduction to clinical nutrition and therapeutic nutrition,
- Scope of Dietetics/Role of Dietitian in health care (*clinical services, community nutrition/public health, wellness and disease prevention, food service, nutrition health education/communication, nutrition research*)
- Normal Nutrition and Adaptation to Therapeutic Diets
- Understand relationship between nutrition and infection (Synergism)
- Types of therapeutic modification of normal diet with respect to- consistency, frequency, foodstuffs, nutrients and methods of cooking (Moist-boiling, pressure cooking, steaming, blanching, poaching and Dry-roasting, toasting, baking methods.).

Unit 2: Diet in Health and Disease: causes, physiological conditions, clinical symptoms and dietary management of:

- Fever (typhoid, tuberculosis)
- Diarrhea
- Eating disorders (anorexia nervosa, bulimia, binge eating)
- Overweight/obesity

Unit 3: Diet in Health and Disease - II

- Causes, physiological conditions, clinical symptoms, dietary management of
- Hypertension
- Diabetes
- Jaundice/ Hepatitis
- Celiac disease, Lactose Intolerance, peptic ulcer

Unit 4: Food Safety and Quality Control:

- Food Hazards(physical, chemical, biological) Food borne Diseases: Cholera, Typhoid, Salmonellosis) Concept, Causes and preventive measures
- Personal Hygiene
- Food Hygiene and Sanitation and Environmental Sanitation and Safety (Water supply, Waste Disposal) at home level.
- Food Adulteration: Concept/Definition as given by FSSAI, Common adulterants present in foods (cereals, pulses, milk and milk products, fats and oils, sugar, honey, spices and condiments), Ill effect of adulterants (metanil yellow, argemone, kesari dal) on human health common methods for detecting adulteration at home)
- FSSAI Act 2006
- Reading and Understanding Food labels with reference to food products
- HFSS Foods and their implications for child health

PRACTICAL GUIDELINES FOR CLASS XII

Assessment of performance:

In class XII – Two examiners (one internal and one external) only assigned for the conduct and assessment of Practical Examinations each in Senior Secondary School Curriculum Question for the viva examinations should be conducted by both the examiners. Question to be more of General nature, project work or the curriculum. Investigatory Project especially those that show considerable amount of effort and originality, on the part of the student, should get suitable high marks, while project of a routine or stereotyped nature should only receive MEDIOCRE marks.

Procedure for Assessment of practical project work: (Total 30 marks):

- Creative skills among students. Students can prepare a Project Report on Operating Costing or Service Costing of any organization viz., transport, hotel, canteen or any other service organization on the basis of their understandability and class room knowledge.
- They may get the guidance from their respective teacher in order to boost their skill and knowledge. The Project should be the sole work of student.
- The mark for the project report will be assessed by the subject teachers, through, a well-planned rubric, keeping in view the core content, quality of the project and Organization of data.
- As students do not have an external examination teacher could follow similar pattern as enunciated for class XII
- To improve students' presentation skills, it is suggested that the students should be trained to present the final project. The concerned teacher and the students should visit to some Industry or service sector in order to understand knowhow of the business sector. Visiting to Industry or service sectors will enhance their knowledge and improve their skills & understanding.

Viva based on Project - 05 marks:

The teacher conducting the final practical examination should ask verbal questions related to the project. If no project has been assigned /made by the students, viva must be based on subject as per the Curriculum only.

Project Report – 25 marks

1. Identify food adulteration using visual and chemical methods:
 - a. Turmeric
 - b. Chana dal
 - c. Bura/sugar
 - d. Milk
 - e. Tea leaves
 - f. Coriander
 - g. Black pepper seed
 - h. Desi ghee

2. Prepare one preserved product; also prepare a suitable label for it.
3. Find out the causes for spoilage of food and enlist general ideas of storing common food at home.
4. Critically evaluate factor-influencing selection of food, culture, family food practices, media, and peer group, availability of foods, purchasing power, individual references & health.
5. Therapeutic modification of normal diet with respect to consistency, frequency, food stuffs, nutrients and methods of cooking.
6. To identify the economic consequences of malnutrition & to learn about the strategies for improving the nutritional status of communities.

PARAMETERS	MARKS
Prepare Project Report based on content, investigation, originality and compilation	25
Viva (Based on Curriculum)	05
TOTAL	30