

**CBSE | DEPARTMENT OF SKILL EDUCATION**  
**CURRICULUM FOR SESSION 2022-2023**  
**FOOD, NUTRITION & DIETETICS (SUBJECT CODE - 834)**

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**JOB ROLE : DIET ASSISTANT**  
**Sector – Health Care**  
**Class – XI & XII**

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**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.

#### **Marks Distribution**

<b>Class</b>	<b>Theory</b>	<b>Practical</b>	<b>Total</b>
Class XI	60	40	100
Class XII	60	40	100

**FOOD, NUTRITION & DIETETICS (SUBJECT CODE - 834)****CLASS – XI**

Total Marks: 100 (Theory - 60 + Practical - 40)

	<b>UNITS</b>	<b>NO. OF HOURS for Theory and Practical</b>	<b>MAX. MARKS for Theory and Practical</b>
<b>Part A</b>	<b>Employability Skills</b>		
	Unit 1 : Communication Skills-III	13	2
	Unit 2 : Self-Management Skills-III	07	2
	Unit 3 : ICT Skills-III	13	2
	Unit 4 : Entrepreneurial Skills-III	10	2
	Unit 5 : Green Skills-III	07	2
	<b>Total</b>	<b>50</b>	<b>10</b>
<b>Part B</b>	<b>Subject Specific Skills</b>		
	Unit 1: Food and Nutrition: Basic Concepts	15	10
	Unit 2: Nutrition through the Life Cycle	25	10
	Unit 3: Public Health and Nutrition: Basic Concept	15	10
	Unit 4: Public Health and Nutrition Disorders	25	10
	Unit 5 : Public Health and Nutrition: Programmes and Policies	7	05
	Unit 6: Nutrition Education, Communication and Behaviour Change	8	05
	<b>Total</b>	<b>95</b>	<b>50</b>
<b>Part C</b>	<b>Practical Work</b>		
	Viva based on Project		05
	Practical File / Power Point presentation	55	15
	Demonstration of skill competency via Lab Activities		20
	<b>Total</b>	<b>55</b>	<b>40</b>
	<b>GRAND TOTAL</b>	<b>200</b>	<b>100</b>

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

## **PRACTICAL GUIDELINES FOR CLASS XI**

### **Assessment of performance:**

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 & Project File – 15 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).

<b>PARAMETERS</b>	<b>MARKS</b>
I) Prepare Project Report based on content, investigation, originality and compilation	35
II) Demonstration of skill competency via Lab Activities	
Viva (Based on Curriculum)	05
<b>TOTAL</b>	<b>40</b>

# FOOD, NUTRITION & DIETETICS (SUB. CODE - 834)

## CLASS – XII

Total Marks: 100 (Theory - 60 + Practical - 40)

	UNITS	NO. OF HOURS for Theory and Practical	MAX. MARKS for Theory and Practical
<b>Part A</b>	<b>Employability Skills</b>		
	Unit 1 : Communication Skills-IV*	13	-
	Unit 2 : Self-Management Skills- IV	07	3
	Unit 3 : ICT Skills- IV	13	3
	Unit 4 : Entrepreneurial Skills- IV	10	4
	Unit 5 : Green Skills- IV*	07	-
	<b>Total</b>	<b>50</b>	<b>10</b>
<b>Part B</b>	<b>Subject Specific Skills</b>		
	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	10
	Unit 4: Food Safety and Quality Control	20	10
	<b>Total</b>	<b>95</b>	<b>50</b>
<b>Part C</b>	<b>Practical Work</b>		
	Viva based on Project	55	10
	Practical File / Power Point presentation		15
	Demonstration of skill competency via Lab Activities		15
	<b>Total</b>	<b>55</b>	<b>40</b>
	<b>GRAND TOTAL</b>	<b>200</b>	<b>100</b>

**Note:** \* Marked units are to be assessed through Internal Assessment/ Student Activities.

They are not to be assessed in Theory Exams.

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

UNIT	SUB-UNIT	SESSION/ ACTIVITY/ PRACTICAL
<b>Unit 1: Clinical and Therapeutic Nutrition:</b>	<b>1.1</b> Introduction to clinical nutrition and therapeutic nutrition,	<b>Session:</b> Understanding the concept of clinical and therapeutic meal planning.
	<b>1.2</b> Scope of Dietetics/Role of Dietician in health care	<b>Session:</b> What is the role of Dietician? <ul style="list-style-type: none"> <li>• clinical services</li> <li>• food service</li> <li>• community nutrition/public health</li> <li>• wellness and disease prevention</li> </ul>
	<b>1.3</b> Therapeutic Normal Nutrition and Adaptation to Diets	<b>Session:</b> Explanation of the normal and regular diet. . Enlisting some common examples of therapeutic diets.
	<b>1.4</b> Synergism between nutrition and infection	<b>Session:</b> Determining and understand relationship between nutrition and infection.
	<b>1.5</b> Therapeutic modification of normal diet with respect to-consistency, frequency, foodstuffs, nutrients and methods of cooking	<b>Session:</b> Describing the types of therapeutic modification of normal diet. <ul style="list-style-type: none"> <li>• Enlisting various cooking methods: Moist-boiling, pressure cooking, steaming, blanching, poaching and Dry-roasting, toasting, baking methods.</li> </ul>
<b>Unit 2: Diet in Health and Disease-I</b>	<b>2.1</b> Fever (typhoid, tuberculosis)	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms of different types of fevers.
	<b>2.2</b> Diarrhoea	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms of Diarrhoea.
	<b>2.3</b> Eating disorders(anorexia nervosa, bulimia, binge eating)	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms of Eating disorders.
	<b>2.4</b> Overweight/obesity	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms of Overweight and obesity.
<b>3. Unit 3: Diet in Health and Disease –II</b>	<b>3.1</b> Hypertension	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms, dietary management of Hypertension.
	<b>3.2</b> Diabetes	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms, dietary management of Diabetes.
	<b>3.3</b> Jaundice/ <b>Hepatitis*</b>	<b>Session:</b> Understanding the causes, physiological conditions, clinical symptoms, dietary management of Jaundice. <b>Practical/Project:</b> <ul style="list-style-type: none"> <li>• <b>Create a project outline and Conduct extensive research on Hepatitis*</b></li> </ul>

**\*Note:- To be assessed in practical only. No question shall be asked from this portion in Theory Exams.**

UNIT	SUB-UNIT	SESSION/ ACTIVITY/ PRACTICAL
	<b>3.4 Celiac disease, Lactose Intolerance, peptic ulcer*</b>	<b>Practical/Project:</b> <ul style="list-style-type: none"> <li>• <b>on Celiac disease, Lactose Intolerance, peptic ulcer*</b></li> </ul>
<b>Unit 4: Food Safety and Quality Control</b>	<b>4.1 Food Hazards</b> (physical, chemical, biological) Food borne Diseases: Cholera, Typhoid, Salmonellosis	<b>Session:</b> Learning about the different types of food hazards. <ul style="list-style-type: none"> <li>• Concept, Causes and preventive measures of Food borne disease.</li> </ul>
	<b>4.2 Personal Hygiene</b>	<b>Session:</b> Understanding basic personal hygiene practices.
	<b>4.3 Food Hygiene and Sanitation and Environmental Sanitation and Safety</b> (Water supply, Waste Disposal) at home level.	<b>Session:</b> Assimilating knowledge about the different kinds of Food Hygiene and Sanitation practices.
	<b>4.4 Food Adulteration: *</b>	<b>Practical:</b> <ul style="list-style-type: none"> <li>• <b>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)*</b></li> </ul>
	<b>4.5 FSSAI Act 2006</b>	<b>Session:</b> Assimilating knowledge about the different kinds of Symbiotic tourism products
	<b>4.6 Food labels with reference to food products*</b>	<b>Practical:</b> <ul style="list-style-type: none"> <li>• <b>Reading and Understanding Food labels with reference to food product*</b></li> </ul>
	<b>4.7 HFSS Foods and their implications for child health*</b>	<b>Project: Create a project</b> <ul style="list-style-type: none"> <li>• <b>outline and Conduct extensive research on HFSS Foods*</b></li> </ul>

Note : To be assessed in Practical only. No question shall be asked from this portion in Theory Exams)

## **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:**

- 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 & Project File – 15 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.

<b>PARAMETERS</b>	<b>MARKS</b>
I) Prepare Project Report based on content, investigation, originality and compilation	35
II) Demonstration of skill competency via Lab Activities	
Viva (Based on Curriculum)	05
<b>TOTAL</b>	<b>40</b>

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