



# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## Shri Vaishnav Institute of Home Science

### Choice Based Credit System (CBCS) in Light of NEP-2020

#### B. Sc. Food and Nutrition Sem IV (2023 – 2026)

Subject Code	Category	Subject Name	Teaching and Evaluation Scheme								
			Theory			Practical		L	T	P	CREDITS
			End Sem University Exam(60%)	Two Term Exam(20%)	Teachers Assessment(20%)	End Sem University Exam(60%)	Teachers Assessment (40%)				
FSN 401	Major	Community Nutrition	60	20	20	0	0	4	0	0	4

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks

#### Course Educational Objectives (CEOs): The students will -

**CEO1:** understand community at large, its health indices, prevalent nutritional problems their assessment.

**CEO2:** gain knowledge about community nutrition services policies and programs.

#### Course Outcomes (COs): Student should be able to-

**CO1:** acquire knowledge about community health, nutritional assessment, and surveillance.

**CO2:** understand dietary surveys and food security.

**CO3:** familiarize with clinical symptoms of PEM and other diseases.

**CO4:** develop skills of anthropometric assessment.

**CO5:** gain awareness on national and international nutritional programs.

### Syllabus

#### UNIT I

- Concept of community, types of Community, factors affecting health of the community.
- Nutritional assessment and surveillance: meaning, need, objectives and importance.
- Concept of family food security

#### UNIT II

- Assessment of nutritional status: methods and application
- Direct methods – anthropometry, biochemical and clinical examination
- Indirect methods – dietary surveys, vital statistics

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### UNIT III

- Nutritional anthropometry: need and importance, standard for reference,
- Techniques of measuring height, weight, head, chest and arm circumference, interpretation of these measurements.
- Use of growth charts.

### UNIT IV

Common nutritional deficiencies- Etiology, clinical features, prevention and management of nutritional deficiencies

- PEM, MAM, SAM
- Micronutrient deficiencies such as Vitamin A deficiency, Thiamine deficiency, Riboflavin Deficiency, Niacin deficiency, Vitamin C deficiency, Vitamin D deficiency, Calcium Deficiency, Iron, Iodine.
- Descriptive list of clinical signs and its interpretation

### UNIT V

- International, National, regional agencies and organizations for community nutrition.
- Nutritional intervention programs to combat malnutrition, nutritional anemia, iodine deficiency disorders, fluorosis, lathyrism.

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- Mahajan, B.K., Saha R.N., and Gupta, M.C., (2013). *Textbook of Preventive and Social Medicine*. Jaypee Brothers Medical Publishers. New Delhi.
- Wadhwa, A., (2013). *Nutrition in the Community*. Elite Publishing House. New Delhi.
- Seshubabu, V. (2011). *Review on Community Medicine*. Paras Medical Books Pvt Ltd.
- Gibney M.J., Margetts, B.M., Kearney, J. M. Arab, I., (Eds) (2004). *Public Health Nutrition*, NS Blackwell Publishing.
- Wadhwa A and Sharma S (2003). *Nutrition in the Community- A Textbook*. Elite Publishing Pvt Ltd, New Delhi

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FSN 402(P)	Major	Nutrition Lab	0	0	0	30	20	4	0	0	2

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

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#### Course Educational Objectives (CEOs): The students will -

**CEO1:** learn about different methods of anthropometric measurement.

**CEO2:** gain knowledge about growth charts, clinical assessment and nutritional assessment methods.

#### Course Outcomes (COs): Student should be able to-

**CO1:** acquainted about nutritional anthropometric measurements.

**CO2:** acquire knowledge about community health, nutritional assessment, and surveillance.

**CO3:** acquire knowledge about dietary surveys and growth charts/

**CO4:** familiarize with clinical symptoms of PEM and other diseases.

**CO5:** develop skills of nutritional assessment by different methods.

#### FSN 402 (P): Community Nutrition

- Anthropometric measurement of infant - length, weight, circumference of chest, mid-upper arm circumference and precautions to be taken.
- Comparison with norms and interpretation of the nutritional assessment data and its significance. Weight for age, height for age, weight for height, body Mass Index (BMI) Waist - Hip Ratio (WHR). Skin fold thickness.
- Growth charts - plotting of growth charts, growth monitoring and promotion.
- Clinical assessment and signs of nutrient deficiencies specially PEM (Kwashiorkor & marasmus). Vitamin A deficiencies, anemia, rickets and B-Complex deficiencies.
- Estimation of food and nutrient intake: Household food consumption data, adult consumption unit, 24 hours dietary recall 24 hours record, weighment method, food diaries, food frequency data, use of each of the above and information available through each individual collection of data.

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DUAL DEGREE PROGRAM (B.Sc. - M.Sc. Food and Nutrition)

B. Sc. Food and Nutrition Sem IV (2022 – 2025)

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			End Sem University Exam(60%)	Two Term Exam(20%)	Teachers Assessment (20%)	End Sem University Exam (60%)	Teachers Assessment (40%)				
FSN 403	Minor I	Food Service Management	60	20	20	0	0	3	0	0	3

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\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

**Course Educational Objectives (CEOs):** The students will

**CEO1:** create an awareness on the organizational aspect and functioning of different types of food service institutions.

**CEO2:** develop managerial skills among the students.

**CEO3:** understand the space allocation and arrangement of food service units.

**Course Outcomes (COs):** Student should be able to

**CO1:** understand the different types of catering system in food service industry.

**CO2:** gain knowledge about kitchens layout, food purchasing, equipment's and menu planning

**CO3:** learn concepts of management, resource management, personal management and financial management.

**CO4:** gain awareness on personal, plant and kitchen hygiene.

## Syllabus

### UNIT I

- Food service industry: types of catering, hotel, motel, restaurant, cafeteria and chain.
- Residential establishment and Industrial catering.
- Transport – Air, Rail, Sea and Space, Contract and outdoor catering.

### UNIT II

- Kitchens: types of kitchens, layout and planning, preparation, storage and service area with relevant too spacing in kitchens.
- Food purchase: procedures and factors involved in the selection of food.

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FSN 403	Minor I	Food Service Management	60	20	20	0	0	3	0	0	3

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### UNIT III

- Styles of service: Definition, objectives and types of waiter service.
- Equipment: classification, factors involved in selection, use and care of major equipment, traditional and modern equipment.

### UNIT IV

- Management: Definition, principles, functions,
- Tools of management and qualities of a good leader.
- Resource management – Money, Time, Energy, Computer applications in menu planning.

### UNIT V

- Personnel Management: Recruitment, selection and induction.
- Financial management: food cost, labor, overheads and projects.
- Sanitation and Safety: Sanitation of Plant and Kitchen Hygiene, personal Hygiene, first aid principles and practice, Health and Safety at work. Use of fire extinguishers.

### Suggested readings:

- Sethi M. and Malham S. (2007). *Catering Management – an integrated approach*”, Wiley Eastern Limited, New Delhi.
- Shring Y, P. (2001) *Effective Food Service Management*, Anmol publications Pvt Ltd. New Delhi.
- Yadav, C, P. (2001). *Management of Hotel and Catering Industry*. Anmol publications Pvt Ltd and Institute of sustainable development, Lucknow, New Delhi.
- Kaufman, R. (2000) *Mega planning- Practical tools for Organizational Success*, Sage Publications Inc.,

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			End Sem University Exam(60%)	Two Term Exam (20%)	Teachers Assessment (20%)	End Sem University Exam (60%)	Teachers Assessment (40%)				
FSN 404	Minor II	Functional Foods and Nutraceuticals	60	20	20	0	0	3	0	0	3

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#### Course Educational Objectives (CEOs): The students will -

**CEO1:** develop comprehensive understanding of different nutraceuticals and functional foods.

**CEO2:** understand phytochemical components and its management on health and diseases.

**CEO3:** awareness regarding the potential of various functional foods in promoting human health.

#### Course Outcomes (COs): Student should be able to-

**CO1:** To develop a comprehensive understanding of different nutraceuticals and functional.

**CO2:** familiarize with plant and animal origin functional foods.

**CO3:** understand different types of functional foods.

**CO4:** develop skills of anthropometric assessment.

**CO5:** gain awareness on national and international nutritional programs.

#### Syllabus

##### Unit I

- Functional foods and Nutraceuticals: definitions, sources, health benefits.
- Bioactive components of functional foods.
- Dietary supplements and fortified foods.

##### UNIT II

- Functional foods of animal origin: Dairy products, sea foods, egg.
- Functional foods of plant origin: fruits, vegetables, nuts, spices, cereals, beverages. Probiotics, prebiotics and symbiotic as functional foods
- Effects of probiotics on health.

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### UNIT III

- Types of functional foods: whole foods, enriched foods, enhanced foods, fortified foods and modified foods.

### UNIT IV

- Diet and disease relationship – nutrition and health claims.
- Food component – approved health claims, labeling considerations for functional ingredients.
- Permissible and impermissible functional claims

### UNIT V

- Market of functional foods, challenges for Functional food delivery and factors affecting consumer interest in functional foods.
- Role of biotechnology in the development of functional foods.

### Suggested readings:

- Dhiraj A. and Vatter M. (2016). *Nutraceuticals And Natural Products Concepts and Applications*, Destech publications, United States of America
- Shakuntala, M. and Shadaksharaswam, K. (2008), *Food Facts and Principles*, New Age International. New Delhi.
- Wildman, R. (2007). *Handbook of nutraceuticals and functional foods*. CRC Press. Florida.
- Branen L., Davidson, P. and Salminen, S. (2001). *Food Additives*. Marcel Dekker. New York City.

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FSN 301	Minor II	Food Preservation	60	20	20	0	0	3	0	0	3