

AC – 20/05/2025

Item No.– 5.2 (N) (Sem IV) (1) (f)

As Per NEP 2020

University of Mumbai



Syllabus for Basket of Open Elective (OE) Vertical 3	
Faculty of Humanities	
Board of Studies in Culinary Arts	
UG Second Year Program	
Semester	IV
Title of Paper	Food Science and Nutrition (Theory)
Credits 2/ 4	2
From the Academic Year	2025-26

Syllabus for Open Elective (OE) (Semester – IV)

Food Science and Nutrition (Theory) (C-2)

Title of Paper - Food Science and Nutrition (Theory)		
Course Code -		
Sr. No.	Heading	Particulars
1	Description of the course: Including but Not limited to:	"Nutrition and Food Science" refers to the study of food, its components (nutrients), and how they interact with the human body, encompassing aspects like food composition, digestion, nutrient absorption, physiological effects of nutrients on health, and the impact of food processing techniques on nutritional value, aiming to understand how diet can influence health and disease prevention This course designed to educate aspiring chefs on the scientific principles behind food, including the nutritional content of ingredients, how cooking methods affect nutrients, and how to create healthy and balanced dishes.
2	Vertical: Major/Minor/Open Elective /Skill Enhancement / Ability Enhancement/ Indian Knowledge System (Choose By √)	√ Open Elective.
3	Type:	Theory
4	Credit:	2 credits (1 credit = 15 Hours for Theory or 30 Hours of Practical work in a semester)
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks Internal exam 20 marks External exam 30 marks

7	Course Objectives: The Objective of this course is – 1. To make students aware of nutritional facts about various products and balanced diet and various new trends in diet. 2. To state the relation between food and various factors influencing eating habits 3. To state the breakup of protein carbohydrate and fat component of food 4. To understand the basic need of vitamins and minerals.	
8	Course Outcomes: After completion of this course students will be able • To state the importance of nutrition on health. • To list types of carbohydrate, proteins and fat, their sources and functions. • To list minerals and vitamins their sources and functions • To state the importance of water to the human body and list modern day health concerns • To plan menus as per various nutritional requirements.	
9	MODULES: - Food Science and Nutrition (Theory)	30 Hours
	MODULE 1: Introduction	
	INTRODUCTION TO NUTRITION • Definition- Malnutrition, Under nutrition, over nutrition, diet, kilo calories, health, Balanced diet • Classification of Nutrients • Food and its functions • Factors affecting food intake and food habits- Geographical, economical, Religious, Social reasons. • Food Pyramid	
	CARBOHYDRATES • Introduction • Classification and its function • Sources • Uses in Food Preparations- (Gelatinization, Gel formation, Dextrinization, Gluten Formation, Caramelization) • Modern day Nutritional Concerns	
	PROTEIN • Introduction • Classification and Function • Sources • Uses in Food Preparation- (Gel Formation, Foaming) • Effect of heat (Denaturation, Coagulation)	

MODULE 2: Food Preservation & Adulteration		
	FATS AND OIL • Introduction • Classification of Fatty acids • Function and Sources • Hydrogenation of Fats • Rancidity- Causes and Prevention VITAMIN, MINERALS, WATER • Introduction • Classification • Source and functions SPECIAL NUTRITIONAL REQUIREMENTS • Sugar Free • Vegan • Anti allergen diet (Mushroom, nuts, Lactose, sea Food)	
10	Text Book:- 1. Catering Science & Food Safety - Sumitra Deshmukh & Dr Asmita Thakur 2. Handbook of food & nutrition, M. Swaminathan, 1999, 3. Food microbiology, W. C. Frazier / D. D. West off, 1991 4. Nutritive value of Indian foods, Gopalan, 1995, Jacob Michael, Delhi 5. Safe food handling, Stanley Thomas 6. The Prevention of food poisoning, Jill Trickett, 1992	
11	Reference Books: 1. Catering Science & Food Safety Textbook Apex Global Mumbai Thaokar, A, Deshmukh, S, 1st Edn. 2018 241p. 2. Food Poisoning & Food Hygiene - Hobbs, Betty & Roberts, Diane 3. Food Hygiene& Sanitation - Rodey S 4. Industry Guide to Good Hygiene Practice: Catering Guide Ships, 2004, Chadwick House Group Ltd., 15, Hatfields, London – SE1 8DJ.	
12	Internal Continuous Assessment: 40% (i.e. 20 Marks out of 50 Total Marks)	External Semester End Examination: 60% (i.e. 30 Marks out of 50 Total Marks)
	Individual Passing in Internal and External Examination: 40%	
13	Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment, etc.	Select at least 3

Examination

QUESTION PAPER PATTERN

(External and Internal)

Examination Semester IV Pattern of Theory Exam

Theory Courses Evaluation Scheme for Second Year (UG) under NEP

Nature of Examination	Bifurcation of Marks				Time	Total Marks
I. Internal Evaluation for Theory Courses						
Continuous Internal Assessment (CIA) Assignment	Sr. No	Examination	Module	Marks	Time	Total Marks
	1	Class Test Total 10 Marks Define / Terminologies / Match the Column / Fill in the Blanks / Multiple Choice Questions (1 Marks each) 5 Marks Short Notes / Problem. Attempt anyone Questions out of two (a & b) (5 Marks each) – 5 Marks	Module I or on Completed syllabus	10 Marks	30 Min	20 Marks
	2	Assignments / Case Study / Presentations / Project / Group Discussion / Ind. Visit. / Tutorial	I & II	10 Marks	Minimum 30 Min per activity	

II. External Examination for Theory Courses						
Semester End Examination	Question No	Paper Pattern (Note: - Theory question paper pattern: Attempt any two out of four questions)	Module	Marks	Time	Total Marks
	Q. 1	Define / Terminologies / Match the Column / Fill in the Blanks / Multiple Choice Questions (1 Marks each)	I & II	15 Marks	1 Hr.	30 Marks
	Q. 2	Short Notes / Problem. Attempt any Three Questions out of four. (a, b, c & d). (5 Marks each)	I & II	15 Marks		
	Q. 3	Essay Type Questions (Attempt any one out of two)	I	15 Marks		
	Q. 4	Essay Type Questions (Attempt any one out of two)	II	15 Marks		
	Note: 1. Attempt any two out of four questions. 2. Certified Journal is compulsory for appearing at the time of Practical Exam. 3. To appear examination minimum prescribed attendance is compulsory.					

Sd/-

**Sign of the BOS
Chairman,
Chef Siraj Shaikh,
Board of Studies in
Culinary Arts**

Sd/-

**Sign of the Offg.
Associate Dean,
Dr. Suchitra Naik
Faculty of
Humanities**

Sd/-

**Sign of the Offg.
Associate Dean,
Dr. Manisha Karne
Faculty of
Humanities**

Sd/-

**Sign of the Offg.
Dean,
Prof. Dr. Anil Singh
Faculty of
Humanities**