



Re-Accredited 'B++' 2.86 CGPA by NAAC

VEER NARMAD SOUTH GUJARAT UNIVERSITY

University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.

વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી

યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.

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ક્રમાંક :ઓથો./પરિપત્ર/૧૨૧૮૦/૨૦૨૫

તા.૨૨/૦૫/૨૦૨૫

પ્રતિ,
આચાર્યશ્રી,
શેઠ પી.ટી. મહિલા કોલેજ ઓફ આર્ટ્સ એન્ડ હોમસાયન્સ,
વનિતા વિશ્રામ કોલેજ કેમ્પસ,
અઠવાગેટ,
સુરત.

વિષય:— B.Sc.Home Science Sem.-1 & 2 નો રીવાઈઝ અભ્યાસક્રમ અંગે.

સુજ્ઞા શ્રી,

સવિનય જણાવવાનું કે, શૈક્ષણિક વર્ષ ૨૦૨૫-૨૬ થી અમલમાં આવેલ B.Sc.Home Science Sem.-1 & 2 નો રીવાઈઝ કરેલ અભ્યાસક્રમ હોમસાયન્સ વિષયની અભ્યાસ સમિતિના ચેરમેનશ્રીએ અભ્યાસ સમિતિવતી મંજૂર કરી વિજ્ઞાન વિદ્યાશાખાને કરેલ ભલામણ સ્વીકારી વિજ્ઞાન વિદ્યાશાખાની તા.૩૦/૦૪/૨૦૨૫ની સભાનાં ઠરાવ ક્રમાંક:૩૭ થી કરેલ ભલામણ સ્વીકારી એકેડેમિક કાઉન્સિલની તા.૦૫/૦૫/૨૦૨૫ ની સભાનાં ઠરાવ ક્રમાંક: ૧૦૧ થી મંજૂર કરેલ છે. જેનો અમલ કરવા આથી જાણ કરવામાં આવે છે.

બિડાણ: ઉપર મુજબ

W. J. S.
કુલસચિવ

પ્રતિ,
૧) ડીનશ્રી, વિજ્ઞાન વિદ્યાશાખા.
૨) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.
.....તરફ જાણ તેમજ અમલ સારૂ.

**SCIENCE
FACULTY**

B.Sc. Home Science

**Major: Food Science &
Nutrition**

NCF- NEP

Revised Syllabus

Semester 1 & 2

SCIENCE FACULTY
B.Sc. Home Science (Major: Food Science & Nutrition)
Proposed New Credit Frame Work as per the NEP for 4-year UG
Degree with Honours and Honours with Research
Proposed New Credit Frame Work as per the NEP for 4-year UG
Degree with Research Project

SEM	Major		Minor		Multi-disciplinary	AEC	SEC	VAC	Internship	Research Project/ On the Job Training	Total Credit
	Theory	Practical	Theory	Practical							
1	3+3		2	2	(2+2)/ (1+1) +(1+1)	2	2/2/ 1+1	2			22
2	3+3		2	2	(2+2)/ (1+1) + (1+1)	2	2/2/ 2	2			22
3	2+2+4	2+2+0	0	0	(2+2)/ (1+1) + (1+1)	2	2/2/ 2	2			22
4	2+2+4	2+2+0	2	2		2	2/2/ 14-1	2			22
5	2+2+2	2+2+2	2+2	2+2			2/2/ 1+1				22
6	2+2+2	2+2+2	2	2		2			4		22
Total Credit	40	24	12	12	12	10	10	8	4		132
	64		24								
7	2+2+2	2+2+2	2	2						6	22
8	2+2+2	2+2+2	2	2						6	22
Total Credit	52	36	16	16	12	10	10	8	4	12	176
	88		32								

* For Theory; 1 credit = 1 hr. for Practical; 1 credit = 2 hr. & for Research Project/Dissertation; 1 credit 2 hr. Summer internship of 04 credit is required only if the student wish to exit after 2nd, or 3rd year. It is over and above in addition to the total credit.

F. Y. B. Sc. (NCF- NEP)
Food Science and Nutrition-SEMESTER-I
Year-2023-24

Sem	Course code	Course Category	Paper Title	Theory/ Practical	Credit
	BFSNMJTOI	Major Course	Fundamentals of Food Science & Nutrition	Theory	3
	BFSNMJPOI		Fundamentals of Food Science & Nutrition	Practical	1
	BFSNMJT02		Applied Science- I	Theory	3
	BFSNMJP02		Applied Science -I	Practical	1
	BFSNMCTOI	Minor Course	Foundation of Art & Design	Theory	2
	BFSNMCPOI		Foundation of Art & Design	Practical	2
	BFSNMDCTOI	Multidisciplinary Course	Public Health Nutrition	Theory	2
	BFSNMDCPOI		Public Health Nutrition	Practical	2
	BFSNAECTOI	Ability Enhancement Course	English Proficiency and Life Skills (English)	Theory	2
	BFSNSECTOI	Skill Enhancement	Nutrition & Fitness	Theory	1
	BFSNSECP0I		Nutrition & Fitness	Practical	1
	BFSNVACTOI	Value Added Course	Bharatiya Knowledge System - An Introduction	Theory	2
			NCC/NSS/Physical Training, Saptadhara		
	TOTAL CREDIT				22

F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24

Sem II	Course code	Course Category	Paper Title	Theory/ Practical	Credit
II	BFSNMJT03	Major Course	Nutrition During Lifespan	Theory	3
	BFSNMJP03		Nutrition During Lifespan	Practical	1
	BFSNMJT04		Applied Science II	Theory	3
	BFSNMJP04		Applied Science II	Practical	1
	BFSNMCT02	Minor Course	Introduction to Clothing & Textiles	Theo	2
	BFSNMCP02		Introduction to Clothing & Textiles	Practical	2
	BFSNMDCT02	Multi	Vedic Nutrition	Theory	2
	BFSNMDCP02	Disciplinary Course	Vedic Nutrition	Practical	2
	BFSNAECT02	Ability Enhancement Course	English Proficiency and Life Skills (English)	Theory	2
	BFSNSECP02	Skill Enhancement	Computer Application in Nutrition	Practical	2
	BFSNVACT02	Value Added Course	Value Education in Bhartiya Knowledge System	Theory	2

F.Y. B. Sc.

Semester I

Food Science and

Nutrition

NCF-NEP

Veer Narmad South Gujarat University, Surat
Programme Name: B. Sc. Food Science and Nutrition
As per NEP 2020

About Programme: The Food Science and Nutrition program is a multidisciplinary academic course that bridges the gap between food, health, and science. It combines the principles of biology, chemistry, and nutrition to explore the science behind the food we eat and its impact on human health and well-being.

This program equips students with the knowledge and practical skills needed to work in various sectors including the food industry, health and wellness fields, government agencies, and research institutions. The curriculum focuses on the composition of foods, food safety, processing technologies, nutritional biochemistry, diet planning, and public health nutrition.

Teaching & Evaluation Scheme: As per NEP 2020 મુજબ રાખવાના રહેશે.
Semester: 1

Course Category	Course Code	Course Title	Marksheet Title in English	Level of Course	Teaching Hours/ Week		Exam Duration		Credit		Internal Marks		External Marks		Total	
					Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th	Pr		
Major Course	BFSNMJT01 BFSNMJP01	Fundamentals of Food Science & Nutrition	Fundamentals of Food Science & Nutrition	200	3	2	1: 30	2	3	1	37	12	38	13	75	25
Major Course	BFSNMJT02 BFSNMJP02	Applied Science - I	Applied Science - I	200	3	2	1: 30	2	3	1	37	12	38	13	75	25
Minor Course	BFSNMCT01 BFSNMCP01	Foundation of Art & Design	Foundation of Art & Design	200	2	4	1	2	2	2	25	25	25	25	50	50
Multi-disciplinary Course	BFSNMDCT01 BFSNMDCP01	Public Health & Nutrition	Public Health & Nutrition	200	2	4	1	2	2	2	25	25	25	25	50	50
Ability Enhancement Course	BFSNAECT01	English Proficiency & Life Skills (English)	English Proficiency & Life Skills (English)	200	2	-	1	-	2	-	25	-	25	-	50	-
Skill Enhancement Course	BFSNSECT01	Nutrition & Fitness	Nutrition & Fitness	200	1	2	00:30	2	1	1	12	12	13	13	25	25
Value Added Course	BFSNVACT01	Bharatiya Knowledge System -An Introduction	Bharatiya Knowledge System -An Introduction	200	2	-	1	-	2	-	25	-	25	-	50	-

[Subject Code-2403030301011001]

F. Y. B. Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24

Major-Fundamentals of Food science and Nutrition (Theory)

Course (subject)Code:	BFSNMJT01	
Subject Title	Fundamentals of Food science and Nutrition (Theory)	
Course Level	200	
Credit	3	
Teaching per week	3	
Course Objectives	<ol style="list-style-type: none"> 1. To learn how To provide students with the knowledge of basic terminology and several aspects of nutrition and the functions of food in healthy life sustenance 2. To ensure that students are familiar with the food classification, functions of various nutrients, their requirements, dietary sources and effect of deficiencies and excess. 3. To be familiar with different cooking methods, their advantages and disadvantages 4. to improve food's nutritional quality. 	
Course Outcome	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate understanding of basic nutrition concepts and accurately use nutritional terminology in the context of healthy living. 2. Identify and classify different types of food and explain the role of macronutrients and micronutrients in the human body. 3. Assess the nutritional requirements of individuals at different life stages and recognize symptoms of nutrient deficiencies and overconsumption. 4. Evaluate various cooking methods in terms of their impact on nutritional value and apply suitable techniques for healthy food preparation. 5. Apply strategies to improve the nutritional quality of meals through informed selection, preparation, and preservation methods. 	
Course Content	<p>1. Basic concepts of Foods and Nutrition:</p> <ul style="list-style-type: none"> • Terms used in Nutrition and Health: Food, Health, Nutrition, Nutrients, Balanced diet, R.D.A., etc. • Classification and Functions of Food, Food groups and Food guide pyramids • Methods of cooking, advantages and disadvantages of cooking methods and effect of cooking on nutritive value • Basic methods to improve the nutritional quality of foods: Germination, Fermentation, Supplementation, Fortification and enrichment <p>Water & Dietary Fibers</p> <ul style="list-style-type: none"> • Functions, daily requirements, Water balance • Dietary Fiber: Classification, sources, composition and nutritional significance 	12

2.	<p>Macronutrient:</p> <p>1. Carbohydrates:</p> <ul style="list-style-type: none"> • Composition and classification • Monosaccharides - glucose, fructose, galactose. • Disaccharides - Maltose, lactose, sucrose • Polysaccharides - Dextrin, starch, glycogen Sources, daily requirements, functions. Effects of too high and too low carbohydrates on health, digestion and absorption of carbohydrate. <p>2. Lipids:</p> <ul style="list-style-type: none"> • Classification & Properties. Fatty acids-composition, properties, sources, daily requirements, functions, digestion & absorption • Role & nutritional significances of PUFA, MUFA, SFA, Omega-3 fatty acid. <p>3. Proteins:</p> <ul style="list-style-type: none"> • Composition, Classification, • Amino acids -Classification, types, functions. • Sources, daily requirements, functions, Effect of too high- too low proteins on health and Digestion. 	12
3.	<p>Micronutrients — I</p> <ul style="list-style-type: none"> • Classification • Fat-soluble vitamins: Vitamin A, D, E and K • Sources, daily requirements, functions, digestion & absorption • Deficiencies and toxicity and its effect on health • Water-soluble vitamins: Vitamin — B complex and Ascorbic acid • Sources, daily requirements, functions, digestion & absorption • Deficiencies and toxicity and its effect on health. <p>Micronutrients — II</p> <ul style="list-style-type: none"> • Classification • Macro minerals: Calcium, Phosphorus, Magnesium, Sodium, Potassium, etc. • Sources, daily requirements, functions, digestion & absorption, deficiency • Micro minerals: Iron, Zinc, Iodine, Fluoride, etc. • Sources, daily requirements, functions, digestion & absorption deficiency 	12
References	<p>1.Mahana R.; Puri S.; Khanna S.; Gupta S.; Jain S.; Seth R. (2020) Textbook of Nutrition and Dietetics, Elite Publishing House</p> <p>2.Mudambi, R. S.; Rajgopal M. V. (2020) Fundamentals of Foods and Nutrition, New age International Pvt. Ltd.</p> <p>3.Handbook of Nutrition and Dietetics, Lotus press, New Delhi</p>	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2403030301011002]

F. Y. B.Sc. (NCF- NEP)

Food Science and Nutrition-I

Year-2023-24

Major-Fundamentals of Food Science and Nutrition (Practical)

Course (subject)Code:	BFSNMJPOI	
Subject Title	Fundamentals of Food science and Nutrition	
Course Level	200	
Credit	1	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none"> 1. To learn measuring different types of foods — grains, flours, raw vegetables, fruits & liquids 2. To provide students with the knowledge of serving size, exchange sizes and cooked amount of different recipes 3. To learn the uses of food guide 4. To standardize different recipes based on portion size 5. To learn the various cooking methods and mediums of cooking. 6. To make a list of rich sources of various nutrients, plan and prepare recipes. 	
Course Outcome	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Measure different types of foods such as grains, flours, raw vegetables, fruits, and liquids accurately. 2. Understand serving sizes, exchange lists, and cooked yields of various recipes. 3. Apply food guides effectively in meal planning and nutrition management. 4. Standardize recipes based on correct portion sizes. 5. Demonstrate knowledge of various cooking methods and mediums. 6. Identify rich sources of different nutrients and skilfully plan and prepare balanced recipes. 	
Course Content	<ol style="list-style-type: none"> 1. Basics of Food Preparation: <ul style="list-style-type: none"> • Food groups- Introduction to food guide, grouping of foods, discussion on nutritive value, calculation of nutrient present in different food groups. • Measuring ingredients —Introduction of common measuring tools use in the preparation of different recipes, Methods of measuring different types of foods like grains, flours, Raw fruits and vegetables, liquids, etc. • Edible portion- Determination of edible portion percentage of different foods. • Standardization of basic recipes and Portion size. 2. Plan and Prepare Recipes for: <ul style="list-style-type: none"> • Different cooking methods • Carbohydrate: High And Low • Energy: High And Low • Protein: High animal protein and High plant protein • Vitamin- A and βcarotene • B-complex vitamins • Vitamin — C 	<p>14</p> <p>14</p>

	<ul style="list-style-type: none"> Minerals — High Calcium and High Iron 	
References	1.Gopalan C., Sastri V. R., Balasubramaniam S.C.; (2018); Nutritive value of Indian Foods; ICMR & NIN, Hyderabad 2. Longvah T., Ananthan R., Bhaskarachary K., Venkalah K.; (2017) Indian food composition tables; N I N, Hyderabad. 3. Some common Indian Recipes and their Nutritive value; N I N, Hyderabad	
Teaching Methodology	Lab work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2403030301022001]

F.Y. B. Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24
Major- Applied Science I (Theory)

Course (subject)Code:	BFSNMJT02	
Subject Title	Major- Applied Science I (Theory)	
Course Level	200	
Credit	3	
Teaching per week	3	
Course Objectives	<ol style="list-style-type: none">1. To know the importance and application of science in daily life2. To develop scientific approach and analytical attitude.3. To acquire basic knowledge of various chemical processes.4. To understand the application of chemistry in food, textile, medicine, agriculture and other industries.	
Course Outcome	Students will be able to: <ol style="list-style-type: none">1. Understand the importance and practical applications of science in everyday life.2. Develop a scientific approach and an analytical attitude toward problem-solving.3. Acquire foundational knowledge of key chemical processes.4. Apply the principles of chemistry across fields such as food, textiles, medicine, agriculture, and various industries.	
Course Content	1. Revision of Basic Chemistry <ul style="list-style-type: none">• Important definitions e.g. Element, compound, mole, atom, mole concept, periodic table and its use, Molecular wt., atomic wt., Crystalloids, colloids, Solution, difference between true solution and colloidal solution, normality, molarity, methods of expressing the strength/concentration of solution.• Calculation and conversion of strength of solution.• Difference between Organic & Inorganic compounds with suitable examples.• Functional groups of organic compounds and its examples.	05
	2. Soaps and detergents <ul style="list-style-type: none">• Introduction and historical background• Definition of Soap and Detergent.• Saponification process• Difference between Soap and Detergent• Advantages and disadvantages of soap and detergents.• Raw material for soap making and its role.• Cleansing action of soap and detergents	04

3.	Agrochemicals Insecticides and Pesticides <ul style="list-style-type: none"> • Introduction and importance • Types of agrochemicals and according to PFA their max. permissible limit to use. • Pesticides in our food. • Health hazards/toxicity of Agrochemicals with suitable examples. 	03
4.	Drugs and Pharmaceuticals Introduction to drugs and its meaning <ul style="list-style-type: none"> • Uses of drugs and causes of disease. • Definition and classification based on chemical structure, names and therapeutic action. • Qualities or properties of an ideal drug/good drug. • Common therapeutic drugs-meaning with suitable examples. • Mode of action of Antibiotics (in brief). • Uses and side effects of Aspirin, antibiotics, paracetamol, sulphanilamide etc. 	06
5.	Dyes <ul style="list-style-type: none"> • Introduction and historical background • Definition of dyes (chromophore, auxochrome). • Classification of dyes based on chemical constitution and mode of application with suitable examples. • Uses of different dyes in food, textile, medicine, laboratory etc. Health hazards of dyes. 	05
6.	Introduction to polymers and their application <ul style="list-style-type: none"> • Definition and types of polymerization-Addition polymerization and condensation polymerization • Classification of polymers with suitable examples: Natural and synthetic, Organic and inorganic, Thermoplastic and Thermosetting Some important polymers and their properties & uses of polyethylene, polyester, Nylon, Teflon, polyvinyl chloride (PVC).	05
References	1. K. Venkatraman (1952): The Chemistry of Synthetic Dyes, Vol. I, Academic Press, New York. 2. Kent S.A. (1974): Riegel's Handbook of Industrial Chemistry. 3. Person D. (1983): The Chemical Analysis of Food, Churchill Livingstone, Edinburgh, London, New York. 4. Textbook of std. 11 and 12 (Chemistry) 5. Textbook of Industrial chemistry by Sharm	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2403030301022002]

**F.Y.B.Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24**

Major- Applied Science- I (Practical)

Course (subject)Code:	BFSNMJPO2	
Subject Title	Applied Science -I	
Course Level	200	
Credit	2	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none"> 1. To learn measuring different types of foods — grains, flours, raw vegetables, fruits & liquids 2. To provide students with the knowledge of serving size, exchange sizes and cooked amount of different recipes 3. To learn the uses of food guide 4. To standardize different recipes based on portion size 5. To learn the various cooking methods and mediums of cooking. 6. To make a list of rich sources of various nutrients, plan and prepare recipes. 	
Course Outcome	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Accurately measure different types of foods, including grains, flours, raw vegetables, fruits, and liquids. 2. Understand serving sizes, exchange sizes, and the cooked quantities of various recipes. 3. Utilize food guides effectively for meal planning and nutrition education. 4. Standardize recipes based on appropriate portion sizes. 5. Demonstrate knowledge of various cooking methods and mediums. 6. Identify rich sources of key nutrients and plan, prepare, and evaluate nutrient-dense recipes. 	
Course Content	<ol style="list-style-type: none"> 1. Introduction to laboratory apparatus 2. Acid — Base Titration - Strong acid — Weak base 3. Acid — Base Titration - Weak acid — Strong base 4. Acid — Base Titration - Strong acid — Strong base 5. pH determination using pH papers 	02 02 02 04 02
References	<ol style="list-style-type: none"> 1. K. Venkatraman (1952): The Chemistry of Synthetic Dyes, Vol. I, Academic Press, New York. 2. Kent S.A. (1974): Riegel's Handbook of Industrial Chemistry. 3. Person D. (1983): The Chemical Analysis of Food, Churchill Livingstone, Edinburgh, London, New York. 4. Prayogik Rashayan Shashtra — B. K. Bhatt 	
Teaching Methodology	Lab work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2303030301030001]

**F.Y.B.Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24**

Minor-Foundation of Art and Design (Theory)

Course (subject)Code:	BFSNMCT01	
Subject Title	Foundation of Art and Design (Theory)	
Course Level	200	
Credit	2	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none">1. To understand elements and principles of art and design.2. To develop aesthetic sense and be a good art consumer.3. To develop an understanding of the application of art principles in design composition of traditional and contemporary art, and interior design.4. To develop skill in using colours to create different effect in space.	
Course Outcome	Students will be able to: <ol style="list-style-type: none">1. Understand the elements and principles of art and design.2. Develop an enhanced aesthetic sense and become discerning consumers of art.3. Apply art principles in the design and composition of both traditional and contemporary artworks, as well as interior design projects.4. Acquire skills in using colours effectively to create various effects and moods within a space.	
Course Content	1. Introduction to design <ul style="list-style-type: none">• Classification and purpose of design• Types of design• Design process	06
	2. Principles of design <ul style="list-style-type: none">• Balance• Harmony• Proportion• Rhythm• Emphasis	06
	3. Elements of Design <ul style="list-style-type: none">• Line• Shape and Form• Space• Texture• Light• Colour	04

4.	Study of colour <ul style="list-style-type: none"> • Classification of colours (Primary, Secondary, Tertiary) • Dimension of colour (Hue, Value, Intensity) • Colour scheme (Monochromatic scheme, Complementary scheme, Analogous scheme, Split complementary scheme Double split complementary, Triads) 	04
5.	Introduction to Residential Space Planning and furnishing <ul style="list-style-type: none"> • Factors influencing selection of house • Factors of house planning • Lighting in house • History of furniture 	06
References	<ol style="list-style-type: none"> 1. Bhatt Pranav and Goenka Shanita (1990): The Foundation of Art and Design, Bombay:Lakhani book Depot. 2. Birrel, Verla Leone (1967) Colour and Design: A Basic Text (Vol-I & II) Digest Submitted in requirement for the degree of education in Teacher college Columbia University. 3. Botter and Lockart (1961) Design for you, New York: John Willey & Sons Inc. 4. Duncan, Miller (1949), Interior Decoration, London, New York, The Publications. 	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2303030301030002]

F. Y. B.Sc. (NCF- NEP)

Food Science and Nutrition-I

Year-2023-24

Minor-Foundation of Art and Design (Practical)

Course (subject)Code:	BFSNMCPOI	
Subject Title	Foundation of Art and Design (Practical)	
Course Level	200	
Credit	2	
Teaching per week	4	
Course Objectives	<ol style="list-style-type: none">1. To develop skill in using colour scheme to create any art.2. To understand elements and principal of design3. To develop an understanding of light and colour in design.4. To Gain knowledge on different styles of motif.	
Course Outcome	Students will be able to: <ol style="list-style-type: none">1. Develop skills in applying color schemes to create various forms of art.2. Understand the elements and principles of design.3. Demonstrate an understanding of light and color in design compositions.4. Acquire knowledge of different styles of motifs and their applications.	
Course Content	1.Drawing of colour wheel with primary, secondary, territory colours	02
	2. Drawing of colour scheme	02
	3. Value scale: Black-while, primary colour, secondary colour and Intermediate colour	04
	4. Drawing of colour spectrum	02
	5. Preparation of motifs <ul style="list-style-type: none">• Naturalistic- Scenic, floral, birds & animal• Stylized/conventional• Geometric• Abstract	04
	6.Designing motifs based on principal of design <ul style="list-style-type: none">• Balance• Rhythm• Proportion• Emphasis• Harmony	06
	7. Texture and collage making	02
	8. Enlargement and reduction of design	04

References	<ul style="list-style-type: none"> • Bhatt Pranav and Goenka Shanita (1990): The Foundation of Art and Design, Bombay: Lakhani book Depot. • Birrel, Verla Leone (1967) Colour and Design: A Basic Text (Vol-I & II) Digest Submitted in requirement for the degree of education in Teacher college Columbia University. • Botter and Lockart (1961) Design for you, New York: John Willey & Sons Inc. • Duncan, Miller (1949), Interior Decoration, London, New York, The Publications. • Kasu, A. (2012). Interior Design, VthEdition, Ashish Book Center, Chamber D. N. Road, Mumbai. • Seetharaman, P., &Pannu P. (2010): Interior Design and Decoration, CBS Publishers
Teaching Methodology	Lab work, Discussion, Projects, Seminar, Assignments, Workshop, Field work
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative

F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24
MDC- Public Health & Nutrition (Theory)

Course (subject)Code:	BFSNMDCT01	
Subject Title	Public Health & Nutrition	
Course Level	200	
Credit	2	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none"> 1. To know the basics of public health nutrition 2. To understand the need of prioritizing nutrition issues 3. To assess the nutritional and Health Status of an individual and the community. 4. To learn nutritional programmes and policies to overcome malnutrition 5. To apply ICT in the formulation of community nutrition education programs. 	
Course Outcome	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Finally, the concepts and knowledge required for the delivery of community nutrition services will be applied to program planning, intervention and program evaluation 2. Gaining knowledge on nutritional programmes and policies overcoming malnutrition 3. Understanding the national, international and voluntary nutritional organizations to combat malnutrition 4. Able to organize community nutrition education programme with the application of computers. 	
Course Content	<ol style="list-style-type: none"> 1. Introduction to public health nutrition a national development <ul style="list-style-type: none"> • Meaning and Scope of Public Health Nutrition • Roles and responsibilities of public health nutritionists • Definitions of optimum health, malnutrition (under nutrition, overweight, obesity, micronutrient deficiency), nutritional status, nutrition intervention, food and nutrient supplements, , nutrition education, morbidity, mortality rates • Nutrition – A Global Developmental Priority Importance of nutrition throughout the life cycle dual burden of malnutrition • Sustainable Development Goals (SDGs), 12 of the 17 Goals require good nutrition to be met Ecology Consequences and of Malnutrition, • Strategies To Overcome Malnutrition Relation of nutrition to national development Nutrition and food security 	12

2.	<p>Social & behaviour change communication Concepts, components and process of communication for nutrition health promotion</p> <ul style="list-style-type: none"> • Definitions of Formal – non-formal communication, Participatory communication • Components of BCC (Sender, Message, Channel, Receiver) • Various types of communication – interpersonal, mass media, visual, verbal/ non-verbal. need of SBCC in India • Social ecological model and communication for development (C4D) approach Concepts and Theories of Social and Behaviour change Communication • Definitions, three characteristics, ten overarching principles for developing SBCC program or campaign • Steps for developing a successful Social and Behaviour change communication program <ol style="list-style-type: none"> 1. Evaluating and preplanning 2. Training workers in nutrition education programmes 3. Methods of education when to teach, whom to teach 4. Use of computers to impart nutrition education 5. Organization of Nutrition education programmes 	16
References	<ul style="list-style-type: none"> • Park A. (2007), Park’s Textbook of Preventive and Social Medicine XIX Edition M/S Banarasidas, Bharat Publishers, 1167, Prem Nagar, Jabalpur, 428 001(India) • Bamji M.S, Prahlad Rao N, Reddy V (2004). Textbook of Human Nutrition II Edition, Oxford and PBH Publishing Co. Pvt. Ltd , New Delhi • Bhatt D.P (2008), Health Education, Khel Sahitya Kendra, New Delhi • Gibney MJ, Margetts BM, Kearney JM, Arab L (2004) Public Health Nutrition Blackwell Publishing Co. UK • Swaminathan M (2007), Essentials of Food and Nutrition. An Advanced Textbook Vol.I, The Bangalore Printing and Publishing Co. Ltd, Bangalore • UNICEF. https://www.unicef.org/ • WHO. http://www.who.int/ • National Guidelines on Infant and Young Child Feeding. wcd.nic.in • WHO non-communicable diseases and risk factors. http://www.who.int/ncds/en/ • National Nutrition Mission – ICDS. icds-wcd.nic.in • Ministry of Health & Family Welfare, www.mohfw.nic.in • Field guide to designing communication strategy, WHO publication-2007 • Communication for Development (C4D) Capability Development Framework, UNICEF and 3D Change, 2009 	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2503030301044006]

F.Y. B. Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24
MDC- Public Health Nutrition (Practical)

Course (subject)Code:	BFSNMDCP01	
Subject Title	Public Health & Nutrition	
Course Level	200	
Credit	2	
Teaching per week	4	
Course Objectives	1. Assessing the nutritional status of an individual, group and community in different settings	
Course Outcome	1. Students will be able to: Finally, the concepts and knowledge required for the delivery of community nutrition services will be applied to program planning, intervention and program evaluation 2. Gaining knowledge on nutritional programmes and policies overcoming malnutrition 3. Understanding the national, international and voluntary nutritional organizations to combat malnutrition 4. Able to organize community nutrition education programme with the application of computers. 5. Apply immunological intervention programmes to overcome epidemic of communicable diseases.	
Course Content	1. <ul style="list-style-type: none"> • Assessing the nutritional status of an individual, group and community in different settings • Conducting 3 Day Weighment Survey for an Individual 	12
	2. <ul style="list-style-type: none"> • Planning and conducting nutrition education programmes in a selected village for 3 days • Spot observations based on the observations through field visits in ICDS centres, MDM school programmes. 	16
References	<ul style="list-style-type: none"> • Bhatt D.P (2008), Health Education, Khel Sahitya Kendra, New Delhi • Swaminathan M (2007), Essentials of Food and Nutrition. An Advanced Textbook Vol.I, The Bangalore Printing and Publishing Co. Ltd, Bangalore • UNICEF. https://www.unicef.org/ • WHO. http://www.who.int/ • National Guidelines on Infant and Young Child Feeding. wcd.nic.in 	
Teaching Methodology	Lab work, Discussion, Projects, Seminar, Assignments, Workshop, Field work.	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

F.Y.B.Sc. (NCF- NEP)
Food Science and Nutrition-I
Year-2023-24
SEC- Nutrition and Fitness (Theory)

Course (subject)Code:	BFSNSECTOI	
Subject Title	Nutrition & Fitness	
Course Level	200	
Credit	1	
Teaching per week	1	
Course Objectives	<ol style="list-style-type: none"> 1. To understand various aspects of health and fitness. 2. To adopt a holistic approach towards health management and disease prevention. 3. To develop the ability to provide guidance on healthy diet, exercise & lifestyle modifications for disease prevention and management. 	
Course Outcome	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the fundamental aspects of health and fitness. 2. Apply a holistic approach to health management and disease prevention. 3. Develop and deliver effective guidance on healthy diet, exercise, and lifestyle modifications for promoting wellness and managing diseases. 	
Course Content		10
1. Introduction to health and fitness	<ol style="list-style-type: none"> 1. Elements of fitness 2. Evaluation of fitness 3. Analysis of Body composition 4. Exercise methods and prevention of exercise injuries 5. Stress management 	
2. Introduction, prevention and control of lifestyle disorders	<ol style="list-style-type: none"> 1. Diabetes 2. CVD, I-ITN 3. Metabolic syndrome 4. PCOS and Reproductive health 5 Lifestyle Modification 	08
3. FAD diets	<ol style="list-style-type: none"> 1. Nutritional Supplements 2. Meal Replacers 3. 4. Appetite Suppressants 	05
References	<ul style="list-style-type: none"> • Elenor N., Whitney S., Rady R. (1993): Understanding Nutrition, West Publishing Company, Minneapolis. • Wardlaw (1993): Perspectives in Nutrition, Paul Insel Mosby. • Robnsson and Lawler (1986): Normal and Therapeutic Nutrition, Mac Millan Pub. Co. • McArdle, William D (2010): Exercise Physiology, Lippincott, William and Wilkins, Philadelphia 	

	<ul style="list-style-type: none"> • Sharkley, Brian J and Gaskill, Steven E. (2007): Fitness and Health, 6th Edition, Human Kinetics, USA.
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative

F.Y. B. Sc.

Semester II

Food Science and

Nutrition

NCF-NEP

Veer Narmad South Gujarat University, Surat
Programme Name: B.Sc. Food Science and Nutrition

As per NEP 2020.

Semester - 2

<i>Course Category</i>	Course Code	Course Title	Marksheet Title in English	Level of Course	Teaching Hours/ Week		Exam Duration		Credit		Internal Marks		External Marks		Total	
					Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th	Pr	Th	Pr
Major Course	BFSNMJT03 BFSNMJP03	Nutrition During Lifespan	Nutrition During Lifespan	200	3	2	1:30	2	3	1	37	12	38	13	75	25
Major Course	BFSNMJT04 BFSNMJP04	Applied Science - II	Applied Science - II	200	3	2	1:30	2	3	1	37	12	38	13	75	25
Minor Course	BFSNTMCT02 BFSNTMCP02	Introduction to Clothing & Textiles	Introduction to Clothing & Textiles	200	2	4	1	2	2	2	25	25	25	25	50	50
Multi-disciplinary Course	BFSNMDCT02 BFSNMDCP02	Vedic Nutrition	Vedic Nutrition	200	2	4	1	2	2	2	25	25	25	25	50	50
Ability Enhancement Course	BFSNAECT02	English Proficiency & Life Skills (English)	English Proficiency & Life Skills (English)	200	2	-	1	-	2	-	25	-	25	-	50	-
Skill Enhancement Course	BFSNSECP02	Computer Application in Nutrition	Computer Application in Nutrition	200	-	4	-	2	-	2	-	25	-	25	-	50
Value Added Course	BFSNVACT02	Bharatiya Knowledge System	Bharatiya Knowledge System	200	2	-	1	-	2	-	25	-	25	-	50	-

[Subject Code-2403030302011001]

F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24
Major- Nutrition During Lifespan (Theory)

Course (subject)Code:	BFSNMJT03	
Subject Title	Nutrition During Lifespan	
Course Level	200	
Credit	3	
Teaching per week	3	
Course Objectives	<ol style="list-style-type: none">1. To Study the meal management during various stages of life span2. To Understand the basics for recommending the dietary allowances3. To Study nutritional needs at different stages of life span	
Course Outcome	Students will be able to learn: <ol style="list-style-type: none">1. Students will be able to plan and manage meals effectively for individuals at different stages of life, considering age-specific physiological and psychological needs2. Students will understand the basis of Recommended Dietary Allowances (RDAs) and use this knowledge to assess and plan balanced diets for various populations3. Students will gain the ability to identify and address the specific nutritional needs of individuals during key life stages such as infancy, childhood, adolescence, adulthood, pregnancy, and old age.	
Course Content 1.	Basics of meal planning <ul style="list-style-type: none">• Basic concept and purposes of Recommending the Dietary Allowances, Factors Affecting Recommended Dietary Allowances• Uses of ICMR- RDA in planning balance diet Exchange system and Dietary Diversity Nutrition in Pregnancy and Lactation <ul style="list-style-type: none">• Physiological changes occurring during Pregnancy• Nutritional problems and Complications during pregnancy• Nutritional care during pregnancy period• R D A during pregnancy• Nutritional care during lactation• R D A during lactation• Food supplements and galactagogues	10

2.	<p>Nutrition in Infancy</p> <ul style="list-style-type: none"> • Composition of Human Milk and Human Milk Substitute • Health benefits of human milk compared to other milk • Weaning and Supplementary Feeding Foods-food square • R D A during Infancy • Feeding Problems and Complications <p>Nutrition in childhood and adolescence</p> <ul style="list-style-type: none"> • Factors to be considered while Planning Diet for Children and Adolescents • Food Habits, Dietary Guidelines, Nutritional Requirements during childhood and adolescence • Eating Disorders during childhood and adolescence 	08
3	<p>Nutrition in adulthood</p> <ul style="list-style-type: none"> • Definition of Reference Man and Reference Woman • Factors affecting to dietary requirements of adults • R D A of Adults • Dietary modifications during adulthood <p>Nutrition in old age</p> <ul style="list-style-type: none"> • Body changes occurs during old age • Nutritional Requirements of Elders • Nutrition Related Problems of Old Age • Dietary Guidelines and diet Modifications 	08
References	<ol style="list-style-type: none"> 1. Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012)Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi. 2. Srilakshmi, B. (2013), Dietetics, New Age International (P) Ltd., New Delhi. 3. SunetraRoday (2017). Food Science and Nutrition, Oxford University Press, New Delhi. 4. Longvah, T, Ananthan, R, Bhaskarachary, K, Venkaiah, K. (2017). Indian Food Composition Tables (IFCT), Indian Council of Medical Research, National Institute of Nutrition, Hyderabad. 5. Shakuntala Manay, Shadaksharaswamy. M (2013) Foods, Facts and Principles, New Age International Pvt Ltd Publishers, 2nd Edition) Ltd., New Delhi. 6. Swaminathan, M. (2012), Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore. 	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24
Major- Nutrition During Lifespan (Practical)

Course (subject)Code:	BFSNMJP03	
Subject Title	Nutrition During Lifespan	
Course Level	200	
Credit	1	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none"> 1. To Study the meal management during various stages of life span 2. To Understand the basics for recommending the dietary allowances 3. To Study nutritional needs at different stages of life span 	
Course Outcome	<p>Students will be able to learn:</p> <ol style="list-style-type: none"> 1. Students will be able to plan and manage meals effectively for individuals at different stages of life, considering age-specific physiological and psychological needs 2. Students will understand the basis of Recommended Dietary Allowances (RDAs) and use this knowledge to assess and plan balanced diets for various populations 3. Students will gain the ability to identify and address the specific nutritional needs of individuals during key life stages such as infancy, childhood, adolescence, adulthood, pregnancy, and old age. 	
Course Content	<ol style="list-style-type: none"> 1. Meal planning for Infants (Supplementary feeding) 2. Meal planning for Pre-schoolers 3. Meal planning for School Going Children 4. Meal planning for Adolescent girl 5. Meal planning for Adolescent boy 6. Meal planning for adult woman & man (Anyone- Sedentary/moderate/ heavy work) 7. Meal planning for old age 	12
References	<ol style="list-style-type: none"> 1. Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012)Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi. 2. Srilakshmi, B. (2013), Dietetics, New Age International (P) Ltd., New Delhi. 3. SunetraRoday (2017). Food Science and Nutrition, Oxford University Press, New Delhi. 	

	<p>4. Longvah, T, Ananthan, R, Bhaskarachary, K, Venkaiah, K. (2017). Indian Food Composition Tables (IFCT), Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.</p> <p>5. Shakuntala Manay, Shadakshara swamy. M (2013) Foods, Facts and Principles, New Age International Pvt Ltd Publishers, 2nd Edition) Ltd., New Delhi.</p> <p>6. Swaminathan, M. (2012), Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore.</p>
Teaching Methodology	Practical work, Discussion, Projects, Seminar, Assignments, Workshop, Field work
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative

F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24
Major- Applied science-II (Theory)

Course (subject)Code:	BFSNMJT04	
Subject Title	Applied science-II	
Course Level	200	
Credit	3	
Teaching per week	3	
Course Objectives	<ol style="list-style-type: none"> 1. To apply the basic knowledge of biology in daily life. 2. To develop an understanding about how cells work. 3. To create an understanding about various diseases and general health care. 	
Course Outcome	<p>Students will be able to learn:</p> <ol style="list-style-type: none"> 1. Students will be able to relate basic biological principles to everyday situations, enhancing awareness of the role of biology in health, environment, and lifestyle choices. 2. Students will gain foundational knowledge about cell components and their functions, enabling them to understand biological processes at the cellular level. 3. Students will develop an understanding of various diseases, their causes, prevention, and the importance of general health care and hygiene in maintaining well-being. 	
Course Content	<p>1.</p> <p>Cell</p> <ul style="list-style-type: none"> • Introduction to cell • Types of cells and their characteristics (prokaryotes vs eukaryotes) • Structures and functions of important organelles of typical animal cell • Cell division- Mitosis and Meiosis (brief introduction) <p>Introduction to Microorganisms</p> <ul style="list-style-type: none"> • Bacteria <p>Structure and Morphology Classification based on response to O₂, temperature and nutritional requirements Economic importance</p> <ul style="list-style-type: none"> • Fungi <p>Morphology, general classification and Physiological characteristics of moulds and yeasts Industrial importance of fungi and yeast</p> <ul style="list-style-type: none"> • Viruses <p>2.</p> <p>Morphology and classification</p>	10

	<p>Chemical basis of heredity</p> <ul style="list-style-type: none"> • Sex determination • Autosomal, recessive and sex-linked inheritance <p>Mutation- types, abnormalities in chromosomes number</p> <p>General Health care and common diseases in human beings</p> <ul style="list-style-type: none"> • Introduction to health and diseases • Types of diseases (infectious and non-infectious-in brief) Common diseases in human beings (in brief) <ul style="list-style-type: none"> ➤ Typhoid ➤ Pneumonia ➤ Common cold ➤ Malaria ➤ Ascariasis ➤ Amoebiasis 	08
3	<p>Genetic Engineering and Biotechnology</p> <ul style="list-style-type: none"> • Definition of terms • Gene cloning • Applications of genetic engineering • Insects and virus resistant plants • Plants with improved characteristics • Production of growth hormone, Insulin 	08
References	<ol style="list-style-type: none"> 1. Dutta A.C.,(1980) 'A class book of Botany' John Brown, oxford university press. Faraday House, Calcutta- 13. 2. Apsangikar D.K. and Rane K.T.(1975): 'Introduction to Botany': Popular Publication Surat. 3. Sharma V.K. (1990) 'Biology class XI'Publishers 23, Daryaganj New Delhi-1 10002. 4. Sankaram M.S. (1990) 'Biology for Class XII'Tata McGraw-Hill Publishing Company Limited 4/12 Asaf Ali Road New Delhi. 5. Gujarat State Board of school Text books (1994) 'Biology Standard 12': old assembly Building Sector 17, Gandhinagar. 6. Gujarat State Board of school Text books (1996) 'Biology Standard 12': old assembly Building Sector 17, Gandhinagar. 7. Maheshwari P. Manoharlal (1996) 'Biology Part 1-7' NCERT New Delhi 	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2403030302022002]

**F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24**

Major- Applied science-II (Practical)

Course (subject)Code:	BFSNMJP04	
Subject Title	Applied science-II	
Course Level	200	
Credit	1	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none">1. To enable students to develop the skill and ability to work systematically in biology laboratory.2. Acquire knowledge of various microorganisms and required skills to study them.3. Apply the knowledge in everyday life.	
Course Outcome	Students will be able to learn : <ol style="list-style-type: none">1. Students will acquire the ability to work systematically and safely in a biology laboratory, following scientific procedures and maintaining accuracy in observations and experiments.2. Students will gain knowledge of various microorganisms and develop the practical skills needed to observe, identify, and study them using appropriate laboratory techniques.3. Students will be able to connect biological concepts to real-life situations, promoting informed decision-making in personal and public health, hygiene, and environmental awareness	
Course Content	<ol style="list-style-type: none">1. Study and care of simple microscope & compound microscope2. Monochrome staining (Curd bacteria)3. Monochrome staining (Pure culture of bacteria)4. Identification of tissues5. Study of common fungi and other pathogens6. Study of medicinally important plants (project)	18
References	<ol style="list-style-type: none">1. Dutta A.C.,(1980) ' A class book of Botany' John Brown, oxford university press. Faraday House, Calcutta- 13.2. Apsangikar D.K. and Rane K.T.(1975): 'Introduction to Botany': Popular Publication Surat.3. Maheshwari P.Manoharlal (1996) 'Biology Part 1-7' NCERT New Delhi	
Teaching Methodology	Lab. work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24

Minor-Introduction to Clothing and Textiles (Theory)

Course (subject)Code:	BFSNMCT02	
Subject Title	Introduction to Clothing and Textiles	
Course Level	200	
Credit	2	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none"> 1. To obtain a broad understanding of textiles and clothing 2. To develop understanding of technical terms involved in textiles. 3. To understand different types of yarns, weaves and finishes. 4. To create awareness and arouse interest in selecting clothes to suit one's personality 	
Course Outcome	<p>Students will be able to learn :</p> <ol style="list-style-type: none"> 1. To demonstrate a broad understanding of the fundamentals of textiles and clothing, including their historical, cultural, and functional significance 2. To Identify and accurately use key technical terms and vocabulary specific to the field of textiles 3. To Analyse and differentiate various types of yarns, weaves, and textile finishes, understanding their characteristics and applications 4. To Apply knowledge of textiles and personal attributes to make informed and appropriate clothing choices that reflect individual personality and lifestyle 	
Course Content		08
1.	<p>Introduction to textiles</p> <ul style="list-style-type: none"> • Classification of textile fibres (Natural, Man made) • Properties of fibre • Types of weaves (Basic weave- Plain weave, Rib weave, Basket weave, Twill weave, Satin weave. Compound weave Dobby weave, jacquard weave, Extra yarn weave, pique, Double clothes 	
2	<p>Introduction to Yarn</p> <ul style="list-style-type: none"> • Types of yarn (staple yarns, filament yarn) • Factors affecting yarn (Yarn twist, Direction of twist, Yarn count) <p>Yarn classification (On the basis of number of parts or structure On the fibre Len</p>	05

3	Introduction to clothing <ul style="list-style-type: none"> • Theories of clothing (Modesty theory, Immodesty theory, Protection theory, Adornment theory) • Functions of clothing • Factors influencing clothing preference (Physiological, psychological, environmental) 	07
4	<ul style="list-style-type: none"> • Types of figures (Hourglass, Top Hourglass, Bottom hour glass, Spoon, Triangle, Inverted Triangle, Rectangle) • Care labels and symbol 	04
References	<ol style="list-style-type: none"> 1. Bhatia R. and Arora C., Introduction to Clothing and Textiles, The Maharaja Sayajirao University of Baroda, Vadodara 1999. 2. Booth, J.E. (1996). Principles of Textile Testing. New Delhi: CBS Publishers & Distributors Pvt. Ltd. 3. Corbman, P.B. (1983). Textiles: Fibre to Fabric. McGraw-Hill Publishers. 5. Collier, B.J., & Epps, H.H. (1998). Textile testing and analysis. Prentice Hall Publishers. 6. Dantyagi, S. (1996). Fundamentals of Textiles and their Care. India: Orient Black swan Private Limited. 7. Madhulika, P. (2013). Weaving. New Delhi: Random Publishing. 	
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2403030302030002]

F. Y. B.Sc. (NCF- NEP)

Food Science and Nutrition-II

Year-2023-24

Minor-Introduction to Clothing and Textiles (Practical)

Course (subject)Code:	BFSNMCP02	
Subject Title		
Course Level	200	
Credit	2	
Teaching per week	4	
Course Objectives	<ol style="list-style-type: none">1. To develop skill in operating sewing machine2. To gain an understanding about different construction techniques and its use.3. To develop skill in hand sewing	
Course Outcome	<ol style="list-style-type: none">1. To demonstrate the ability to operate a sewing machine with proper technique, ensuring safety and precision2. To Exhibit proficiency in basic hand sewing skills, including seams, hemming, and simple repairs, with attention to detail and finish	
Course Content	<ol style="list-style-type: none">1. Introduction to type of sewin machines, its art.2. Bod measurement3. Identification and importance of fabric rain line4. Hand sewin Technique- Hand bastin, Hemming, Back stitch5. Basic seam- Plain seam, French seam, to stitched, flat and fell seam6. Gathers and pleats	18
References	<ol style="list-style-type: none">1. Anna Jacob Thomas, The art of sewing, UBS publishers' distributors, 19952. Readers digest, Complete guide to sewing, Trusted media brands, USA	
Teaching Methodology	Lab. work, Discussion, Projects, Seminar, Assignments, Workshop, Field work	
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative	

[Subject Code-2403030302040001]

F. Y. B.Sc. (NCF- NEP)

Food Science and Nutrition-II

Year-2023-24

MDC-Vedic Nutrition (Theory)

Course (subject)Code:	BFSNMDCT02	
Subject Title	Vedic Nutrition	
Course Level	200	
Credit	2	
Teaching per week	2	
Course Objectives	<ol style="list-style-type: none">1. To introduce the basic principles of nutrition in Ayurveda2. To link the Ayurvedic nutrition with modern dietary practices for health3. To analyse basic tenets of traditional diets and healthy recipes4. To understand the contemporary food habits in everyday life	
Course Outcome	Students will be able to learn: <ol style="list-style-type: none">1. To explain the fundamental principles of nutrition as outlined in Ayurveda, including the concept of <i>Ahara</i> and <i>Rasayana</i>2. To correlate Ayurvedic nutritional principles with modern dietary guidelines to promote overall health and wellness3. To analyse traditional diets and healthy recipes using Ayurvedic and modern perspectives to evaluate their nutritional value4. To understand and critically assess contemporary food habits and their impact on health in everyday life	
Course Content		
1.	Introduction to Ayurvedic Nutrition <ul style="list-style-type: none">• Ayurveda and Indian food cultures• Nutrition and lifestyle transition over the years• Regional Food Traditions of India	08
2.	Basic principles of Food and Nutrition and Ayurveda <ul style="list-style-type: none">• Understanding rich sources of nutrients• Concept of Doshas & assessment• Ayurvedic Principles of food habits and factors determining quality of food (<i>Ahara vidhi visheshaayatana</i>)• FSSAI regulations on Ayurvedic Aahar	15
3	Ayurvedic Diets <ul style="list-style-type: none">• Principles of Diet: <i>Aharavidhi vidhan</i>, Sattvic, Rajasi, Tamasic foods• Incompatible food (<i>Viruddha Ahara</i>), Pathya; Apathya; Viprita Ahaar• Lifestyle Management with <i>Dincharya</i> and <i>Ritucharya</i>• Application of Ayurvedic diets to stress linked food behaviour	15
References	<ol style="list-style-type: none">1. Charaka Samhita – Translated by P.V. Sharma A foundational text of Ayurveda that covers principles of nutrition, digestion, and lifestyle.	

	<ol style="list-style-type: none"> 2. Ashtanga Hridayam – Translated by Dr. K.R. Srikantha Murthy Explains Ayurvedic dietetics, digestion, and the role of food in maintaining health. 3. Bhavaprakasha Nighantu – Edited by K.C. Chunekar & G.S. Pandey A traditional Ayurvedic materia medica covering food substances and herbs. 4. Principles of Ayurveda by Anne Green An accessible guide for understanding Ayurveda in the context of diet and lifestyle.
Teaching Methodology	Class work, Discussion, Projects, Seminar, Assignments, Workshop, Field work
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative

[Subject Code-2403030302040002]

F. Y. B.Sc. (NCF- NEP)

Food Science and Nutrition-II

Year-2023-24

MDC- Vedic Nutrition (Practical)

Course (subject)Code:	BFSNMDCP02										
Subject Title	Vedic Nutrition										
Course Level	200										
Credit	2										
Teaching per week	4										
Course Objectives	<ol style="list-style-type: none">1. To introduce the basic principles of nutrition in Ayurveda2. To link the Ayurvedic nutrition with modern dietary practices for health3. To analyse basic tenets of traditional diets and healthy recipes4. To understand the contemporary food habits in everyday life										
Course Outcome	Students will be able to learn: <ol style="list-style-type: none">1. To analyse traditional diets and healthy recipes using Ayurvedic and modern perspectives to evaluate their nutritional value										
Course Content	<table border="0"><tr><td>1. Visit your local market and classify the available food items according to Sattvic, Rajasi, Tamasic foods</td><td>05</td></tr><tr><td>2. Conduct a survey of 10-15 households in your locality<ul style="list-style-type: none">• To study food behaviour and analyse them in light of Ayurvedic dietary principles of Sattvic, Rajasi, Tamasic• To study the food consumption patterns and intake of incompatible food: Viruddha Ahara, Pathya; Apathya; Viprita Ahaar• To know about their adopted lifestyle Dincharya and Ritucharya</td><td>08</td></tr><tr><td>3. Self-assessment of own body constituents (dosha) based on the questionnaire</td><td>04</td></tr><tr><td>4. Preparation of a meal according to the Indian Regional Ayurvedic foods</td><td>04</td></tr><tr><td>5. Preparation of seasonal meals according to the nature of food.</td><td>04</td></tr></table>	1. Visit your local market and classify the available food items according to Sattvic, Rajasi, Tamasic foods	05	2. Conduct a survey of 10-15 households in your locality <ul style="list-style-type: none">• To study food behaviour and analyse them in light of Ayurvedic dietary principles of Sattvic, Rajasi, Tamasic• To study the food consumption patterns and intake of incompatible food: Viruddha Ahara, Pathya; Apathya; Viprita Ahaar• To know about their adopted lifestyle Dincharya and Ritucharya	08	3. Self-assessment of own body constituents (dosha) based on the questionnaire	04	4. Preparation of a meal according to the Indian Regional Ayurvedic foods	04	5. Preparation of seasonal meals according to the nature of food.	04
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3. Self-assessment of own body constituents (dosha) based on the questionnaire	04										
4. Preparation of a meal according to the Indian Regional Ayurvedic foods	04										
5. Preparation of seasonal meals according to the nature of food.	04										

References	<ol style="list-style-type: none"> 1. Eat-Taste-Heal: An Ayurvedic Guidebook and Cookbook for Modern Living by Thomas Yarema, Daniel Rhoda, and Johnny Brannigan Blends traditional Ayurvedic wisdom with modern culinary practices. 2. Ayurveda: The Science of Self-Healing by Dr. Vasant Lad Includes chapters on Ayurvedic nutrition, body types, and food guidelines. 3. Ayurvedic Nutrition: Ancient Wisdom for Modern Wellbeing by Durgadas (Rodney Lingham) A modern perspective on Ayurvedic dietetics based on classical teachings. 4. Healing with Whole Foods by Paul Pitchford Integrates Eastern healing traditions (including Ayurveda) with modern nutrition.
Teaching Methodology	Practical work, Discussion, Projects, Seminar, Assignments, Workshop, Field work
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative

[Subject Code-2403030302060001]

**F. Y. B.Sc. (NCF- NEP)
Food Science and Nutrition-II
Year-2023-24**

SEC- Computer Application in Nutrition (Practical)

Course (subject)Code:	BFSNSECP02	
Subject Title	Computer Application in Nutrition	
Course Level	200	
Credit	2	
Teaching per week	4	
Course Objectives	These applications allow the management of relevant information, facilitating and speeding up the diet treatment, and are designed for a general population with potential nutritional problems	
Course Outcome	<ol style="list-style-type: none"> 1. To understand the role and importance of computer applications in the field of nutrition and dietetics 2. To use software tools (e.g., MS Excel, Word, PowerPoint) for data entry, diet planning, menu preparation, and presentation 3. To apply nutritional analysis software and online databases to assess dietary intake and plan balanced meals 4. To utilize the internet and mobile applications to access credible nutrition information and resources for client education. 	
Course Content	<ol style="list-style-type: none"> 1. Use of word processing software for creating reports and presentation 2. Use of Google Docs, Sheets, Slides and Forms 3. Use of internet data base and software tools for literature review d bibliography 4. Statistical analysis using MS-Excel and other statistical software for : <ul style="list-style-type: none"> • Applications in food quality data analysis • Applications in nutritional epidemiology and clinical study data analysis • Representation 	<p>05</p> <p>08</p> <p>06</p> <p>08</p>
References	<ol style="list-style-type: none"> 1. Microsoft Word 2021 Step by Step by Joan Lambert <i>Detailed instructions for creating professional documents and reports.</i> 	

	<ol style="list-style-type: none"> 2. "Doing a Literature Review in Health and Social Care" by Helen Aveyard Excellent guide for conducting systematic literature reviews. 3. "The Literature Review: Six Steps to Success" by Lawrence A. Machi & Brenda T. McEvoy Structured approach to research and referencing. 4. Statistical Analysis Using MS Excel and Other Software 5. "Data Analysis Using Microsoft Excel" by Michael R. Middleton A practical guide for statistical applications in Excel. 6. "Using SPSS for Windows and Macintosh: Analysing and Understanding Data" by Samuel B. Green & Neil J. Salkind
Teaching Methodology	Practical work, Discussion, Projects, Seminar, Assignments, Workshop, Field work
Evaluation Method	50% CCE (Continues and Comprehensive Evaluation) Formative 50% SEE (Semester End Evaluation) Summative