

**SARDAR PATEL UNIVERSITY, VALLABH VIDYANAGAR**

**B.Sc. Home Science**

**(Under Choice Based Credit Scheme) (Effect from June, 2022-23)**

**Semester - FOURTH (FOODS AND NUTRITION)**

Course Type	Course Code (10 Digit)	Name of Course	Theory (T) Practical (P)	Credit	Contact hrs/ week	Exam Duration in hrs	Marks		
							Internal	External	Total
<b>Ability Enhancement Courses</b>	UH04AHSC51	Entrepreneurship Management	T	2	2	2	15	35	50
<b>Core Courses</b>	UH04CFDN51	Human Physiology II	T	2	2	2	15	35	50
	UH04CFDN52	Human Nutrition	T	4	4	3	30	70	100
	UH04CFDN53	Nutritional Assessment and Surveillance	T	2	2	3	15	35	50
	UH04CFDN54	Nutritional Assessment and Surveillance	P	2	4	3	15	35	50
	UH04CFDN55	Biochemistry	T	4	4	3	30	70	100
	UH04CFDN56	Biochemistry	P	2	4	3	15	35	50
	UH04CFDN57	Food Safety and Quality control	T	2	2	2	15	35	50
<b>Skill Enhancement Courses</b>	UH04SFDN51	Computer Application in Foods and Nutrition	P	2	4	3	15	35	50
<b>Elective Courses (Any One)</b>	UH04EHSC51	Event Management	T	2	2	2	15	35	50
	UH04EHSC52	Counseling Techniques	T	2	2	2	15	35	50
	UH04EHSC53	Fashion Basics	T	2	2	2	15	35	50
	UH04EHSC54	Geriatric Nutrition	T	2	2	2	15	35	50
		<b>Total</b>		<b>24</b>	<b>30</b>		<b>180</b>	<b>420</b>	<b>600</b>



Bachelor of Science - Home Science  
(B.Sc.- H. Sc.) (Home Science) Semester (IV)

Course Code	UH04AHSC51	Title of the Course	Entrepreneurship Management
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Initiate entrepreneurial motive and impart skills and capabilities for entrepreneurship.</li><li>2. Ignite aspirations to become entrepreneurs and successful managers.</li><li>3. Analyse the environment related to small-scale industry and business.</li><li>4. Understand the process and procedures of setting up small enterprises.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Entrepreneurship (a) Conceptual: Meaning and definition of entrepreneurship (b) Entrepreneur: Meaning, qualities, functions and types of Entrepreneur. (c) Characteristics and barriers in entrepreneurship. (d) Enterprise: Definition, nature and classification (e) Forms of Organization – Sole proprietorship, partnership, Joint Stock Company (f) Role of entrepreneur in economic development.	30
2.	Finance and Sources for small scale industries (a) Accounting for enterprise: Meaning, need and objectives of accounting, Process of Accounting, Bookkeeping, Journal, Ledger: Balance Sheet, Final Accounts; Fixed capital & working capital; Auditing- Nature and types (b) Institutional support/ Sources: Commercial banks- Central level; State level.	30
3.	Problems of small sector: Management problems, marketing problems, sick units; Causes and remedies.	10
4.	Project formulation	30





	<ul style="list-style-type: none"><li>(a) Small scale enterprise: Definitions, types, characteristics.</li><li>(b) Steps for starting a small industry.</li><li>(c) Guidelines for preparing a project report.</li><li>(d) Steps in Project formulation</li><li>(e) Procedures and formalities (plant location, land, building, water and power.</li><li>(f) Project appraisal: Market feasibility, technical feasibility, financial and economic feasibility</li></ul>	
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Teaching-Learning Methodology	PowerPoint presentation. Lectures, discussion, industrial visit, ICT enabled teaching, project work.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand the concept of entrepreneurship, entrepreneur and enterprise
1.	The procedure to start a Small-Scale Industry.
2.	Foresee the type of risk factors of Small-Scale Industry.
3.	Identify ways to approach supportive Institutions and Banks for starting an enterprise.
4.	Focus on the formation of project proposal and practice effective accounting processes
3.	To develop business skills.

Suggested References:
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Sr. No.	References
1.	Dr. Rao, M., Biswas, M. (2019). <i>Entrepreneurship Development and Management</i> . Delhi: Anvi Books and Publishers.
2.	Desai, V. (2011). <i>Dynamics of Entrepreneurial development</i> . Mumbai: Himalaya Publishing House.
3.	Gupta, C.B. & Srinivasan, N.P. (2000). <i>Entrepreneurship Development in India</i> . New Delhi: Sultan Chand & Sons.
4.	Khanna, S.S. (2003). <i>Entrepreneurship Development</i> . New Delhi: S. Chand and Co Ltd.

On-line resources to be used if available as reference material

On-line Resources

<https://socialinnovationacademy.org/>

<https://news.gcase.org/2011/10/24/what-is-entrepreneurial-management>

<https://en.wikipedia.org/wiki/Entrepreneurship>

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Bachelor of Science-Home Science  
(B.Sc.-H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN51	Title of the Course	Human Physiology - II
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Identify anatomical features of the body, including cells, tissues, organs and organs systems</li><li>2. Describe the gross anatomy of the organs composing organ systems.</li><li>3. Relate biological structure and function of various organ systems.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	The Cardiovascular System Blood and its composition, blood groups, coagulation of blood.	20
2.	Structure and function of heart, heart rate, cardiac cycle, cardiac output, blood pressure and their regulation, circulation of blood (general course of circulation)	20
3.	The lymphatic and Immune system	20
4.	The Respiratory System: Structure of Respiratory System. Mechanism of respiration.	20
5.	The Reproductive System: Structure and function of Sex glands and organs including hormones, Menstrual cycle, parturition	20

Teaching-Learning Methodology	Chalk and Board, Power Point Presentations, Models, Video Clips, Group Work, Posters and Charts, Lecture
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%





2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to

1.	Identify various terminologies used in Anatomy and Physiology
2.	Describe the anatomical structure of the various body organs
3.	Describe the normal physiology of the various body organs

Suggested References:

Sr. No.	References
1.	Guyton, A.C., & Hall, J. E. (1966): <i>Text book of Medical Physiology</i> . Bangalore: (9 <sup>th</sup> ed). Prism Books (Pvt.) Ltd.
2.	Waugh, A., & Grant, A. (2018): <i>Ross &amp; Wilson Anatomy and Physiology in Health and Illness</i> , (13 <sup>th</sup> ed). Churchill Livingstone Elsevier.

On-line resources to be used if available as reference material

On-line Resources

[Ross & Wilson Anatomy and Physiology PDF 12<sup>th</sup> & 13<sup>th</sup> Edition Download \(allmedicalpdfs.com\)](#)

[e-PGPathshala \(inflibnet.ac.in\)](#)





Bachelor of Science - Home Science  
(B.Sc. - H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN52	Title of the Course	Human Nutrition
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. Understand the functions and sources of nutrients.</li><li>2. Apply the knowledge in maintenance of good health for the individual and the community.</li><li>3. Students will familiar with the factors affecting availability and requirements.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	<ol style="list-style-type: none"><li>(a) Brief history of Nutritional Science.</li><li>(b) Minimal nutrition requirements and RDA- formulation of RDA and dietary guidelines- Reference man and reference woman.</li><li>(c) Water- functions and requirements.</li></ol>	20
2.	Energy in Human Nutrition- Energy Balance, Energy System, Assessment of energy requirements.	10
3.	Proteins- Classification of Protein, Assessment of protein quality (BV, PER, NPU), digestion and absorption, Factors affecting bioavailability.	10
4.	Lipids- Classification of Lipids, digestion and absorption, intestinal resynthesis of triglycerides. types of fatty acids.	15
5.	Carbohydrates- Classification of Carbohydrates, digestion and absorption, blood glucose and effect of different Carbohydrates on blood glucose, Glycemic index. Dietary Fibre- Types and Importance.	15
6.	<ol style="list-style-type: none"><li>(a) Minerals – Classification of Minerals, digestion, absorption and bioavailability Calcium, Phosphorus, Iron, Fluoride, Zinc, Selenium, Iodine.</li><li>(b) Vitamins- Classification of Vitamins, Fat soluble (Vitamin - A, D, E and K) and Water soluble (Vitamin B1, B2, B3, B-12 and Vitamin -C) digestion, absorption and bioavailability</li></ol>	30

Teaching-Learning Methodology	Lecture Method, Questions-Answer method, Discussion method, Brain storming method, Observational method, Use of ICT
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Get the knowledge of sources and functions of various nutrients.
2.	Get familiar with digestion, metabolism and bioavailability of nutrients in our body.

Suggested References:	
Sr. No.	References
1.	Guthrie, A.H. (1986). <i>Introductory Nutrition</i> U.S.: 6th Ed. The C.V. Mosby Company.
2.	Robinson, C. H., & Lawler, M. R. (1982). <i>Normal and therapeutic nutrition</i> Germany: (Ed. 16). Collier Macmillan Publishers.
3.	Indian council of medical research (1988) <i>Nutrient requirements and recommended dietary allowances for Indians</i> , New Delhi.
4.	Livesey, G. (1987). Energy and protein requirements the 1985 report of the 1981 Joint FAO/WHO/UNU Expert Consultation. <i>Nutrition Bulletin</i> , 12(3), 138-149.
5.	WHO Technical reports series for different nutrients. .
6.	Bamji, M. S., Krishnaswamy, K., & Brahmam, G. N. V. (Eds.). (2016). <i>Textbook of human nutrition</i> . Oxford & IBH.

On-line resources to be used if available as reference material
On-line Resources







**SARDAR PATEL UNIVERSITY**  
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**(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))**  
**Syllabus with effect from the Academic Year 2022-2023**

[e-PGPathshala \(inlibnet.ac.in\)](http://inlibnet.ac.in)

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Bachelor of Science-Home Science  
(B.Sc.- H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN53	Title of the Course	Nutritional Assessment & Surveillance
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Understand the concept of nutritional status and its relationship to health.</li><li>2. Know aims, objectives, methods used for assessment of nutritional status.</li><li>3. Students can identify the factors responsible for the malnutrition.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>Nutritional surveillance and surveillance system</p> <ul style="list-style-type: none"><li>(a) Definition and term used in nutritional surveillance</li><li>(b) Nutritional monitoring</li><li>(c) Evaluation of programme impact, timely warning and intervention system</li><li>(d) Types of nutrition surveillance, nutrition surveillance for action (Triple A cycle)</li><li>(e) NCD's like Cardiovascular Diseases, diabetes, Pulmonary and SDG's and its role in surveillance</li></ul>	25
2.	<p>Nutritional status assessment - meaning, need, and importance.</p> <ul style="list-style-type: none"><li>(a) Nutritional assessment based on Anthropometry- Anthropometry techniques like weight for age, weight for height, BMI for age, MUAC, Skinfold thickness, waist to hip ratio, comparison with references, Criteria used to determine at risk level for various target population.</li><li>(b) The new WHO growth standards for children and adolescents its use and implication, and classification to define malnutrition in all forms, implication of introducing new standards in school health programmes.</li></ul>	25
3.	<p>Nutritional assessment based on Dietary intake</p> <ul style="list-style-type: none"><li>(a) Methods of dietary intake, diet surveys comparison between methods, Rapid assessment method of dietary intake.</li><li>(b) Dietary diversity score, household, individual, its significance.</li><li>(c) Understanding new RDA and ADI's and its concept and use of</li></ul>	25





	consumption unit in dietary survey	
4.	Nutritional assessment through Biochemical Parameters and comparison with reference values. (a) Lipids, Carbohydrates, Protein, Iron, Vitamin D, B-complex, Vitamin C, Iodine, Fluoride, TB, HIV, CD4 count. (b) Clinical signs and symptoms for nutritional related disorders.	25

Teaching-Learning Methodology	Lecture Method, Questions-Answer method, Discussion method, Brain storming method, Observational method, Use of ICT
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Students can apply the knowledge and art of assessment methods for Nutritional assessment and surveillance of human groups.
2.	Develop specific skills to apply the most widely used methods.

Suggested References:	
Sr. No.	References
1.	Jelliffe, D. B., & World Health Organization. (1966). <i>The assessment of the nutritional status of the community (with special reference to field surveys in developing regions of the world)</i> . Geneva: World Health Organization.
2.	Saln, D. R., Lockwood, R., & Scrimshaw, N. S. (1981) <i>Methods for the evaluation of the Impact and Nutrition Programme</i> U N University.





3.	Rutchie, J. A. S. (1967): <i>learning better nutrition</i> , FAO Rome.
4.	Gopalan, S., Ganesh, K., & Patnaik, R. (1998). <i>Nutrition Foundation of India</i> . Special Publication Series.
5.	Beghan, I. M. & Dajardan, B. (1988) <i>A guide to Nutritional Status Assessment</i> Geneva: World Health Organization.
6.	Gopaldas, T., & Seshadri, S. (1987). <i>Nutrition, monitoring, and assessment</i> . Ahmedabad: Oxford University Press.
7.	Mason, J. B., Habicht, J. P., Tabatabai, H., & Valverde, V. (1984). <i>Nutritional surveillance</i> . Geneva: World Health Organization.

On-line resources to be used if available as reference material

On-line Resources

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Bachelor of Science-Home Science  
(B.Sc. - H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN54	Title of the Course	Practical-Nutritional Assessment and Surveillance
Total Credits of the Course	02	Hours per Week	04
Course Objectives:	1. Identify appropriate sampling methods, measurement 2. Understand the relationship between nutritional status and anthropometric measurements/ Health.		

Course Content		
Unit	Description	Weightage* (%)
1.	To assess the nutritional status by use of anthropometric measurements: Measurement of child's height and weight.	10
2.	Interpretation of data in weight for age, height for age, weight for height.	10
3.	Circumference measurements-head, chest, mid upper arm, waist-hip ratio. Measurements of fat using skin fold thickness.	10
4.	Clinical assessment of PEM, Vitamin A, Anemia, B complex vitamins	10
5.	Formulating tool, collection of Data, estimation of Intake by different dietary methods.	20
6.	Nutrition Health Education activities-preparation of charts, posters, street plays, skits, puppets, lecture demonstration (any one activity by one group).	10
7.	Assessment of BMI for Adolescents	10
8.	Field visits for surveillance system used in nutrition and health programmes.	20

Teaching-Learning Methodology	Questions-Answer method, Discussion method, Brainstorming method, Observational method
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written & Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Identify appropriate sampling methods, measurement scales and tools of data collection and appropriate uses of each.
2.	Impart knowledge about importance of the nutrition and health.

On-line resources to be used if available as reference material
On-line Resources
<a href="http://e-PGPathshala.inflibnet.ac.in">e-PGPathshala (inflibnet.ac.in)</a>

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Bachelor of Science-Home Science  
(B.Sc. - H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN55	Title of the Course	Biochemistry
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. Enable students to develop the principles of biochemistry as applicable to human nutrition.</li><li>2. Obtain an insight into chemistry of major nutrients and physiologically important compounds.</li><li>3. Comprehend the biological process and system as applicable to human nutrition</li></ol>
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Course Content

Unit	DESCRIPTION	Weightage* (%)
1.	Carbohydrates – (a) Classification, General structure, Properties. (b) Metabolism – Glycolysis, Citric acid cycle, Gluconeogenesis, glycogen synthesis and degradation, HMP shunt, Electron Transport chain, Oxidative phosphorylation	25
2.	Proteins- (a) Classification, General structure, Properties (b) Biosynthesis of protein, degradation (transamination, deamination, urea cycle)	25
3.	Fat – (a) Classification, General structure, Properties (a) Oxidation of fatty acids ( $\alpha$ , $\beta$ ) biosynthesis of lipids (ketone bodies formation, Cholesterol, Synthesis, etc)	25
4.	Hormones- Classification, structure, functions	25

Teaching-Learning Methodology	Lectures, Power point, Group work
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Evaluation Pattern

Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%





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2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to

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|----|--|
| 1. | Learn develop the principles of biochemistry as applicable to human nutrition and dietetics. |
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Suggested References:

Sr. No.	References
1.	West, E. S., Todd, W. R., Mason, H. S., & Van Bruggen, J. T. (1974). <i>Textbook of Biochemistry</i> , New Delhi: Amerind Publ. Co. Pvt. Ltd.
2.	Vasudevan, D. M., Sreekumari, S., & Vaidyanathan, K. (2016). <i>Textbook of biochemistry for medical students</i> . New Delhi: Jaypee Medical Ltd.
3.	Nelson, D. L., Lehninger, A. L., & Cox, M. M. (2008). <i>Lehninger principles of biochemistry</i> . Ahmedabad: Macmillan India Ltd.

On-line resources to be used if available as reference material

On-line Resources

[e-PGPathshala \(inlibnet.ac.in\)](http://e-PGPathshala (inlibnet.ac.in))

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Bachelor of Science-Home Science  
(B.Sc.- H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN56	Title of the Course	Practical-Biochemistry
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. Enable students to develop the principles of biochemistry as applicable to human nutrition.</li><li>2. Obtain an insight into chemistry of major nutrients and physiologically important compounds.</li><li>3. Understand the biological process and system as applicable to human nutrition</li></ol>
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Course Content		
Unit	DESCRIPTION	Weightage* (%)
1.	Qualitative tests for carbohydrates, find out unknown sugar.	10
2.	Qualitative tests for Protein	10
3.	Qualitative tests for oils and fat	10
4.	To detect the presence of carbohydrate, fat and proteins in food stuff	10
5.	To determine acid value of given sample of oil or fat	05
6.	To determine saponification value of given sample of oil or fat	10
7.	To determine iodine value of a given sample of fat and oil	10
8.	To measure pH of different solution with help of pH meter.	05
9.	To study principle and working of colorimeter	10
10.	To determine protein content of given sample by biuret method.	10
11.	To determine Glucose by Fehling's method	10

Teaching-Learning Methodology	<ol style="list-style-type: none"><li>1. Demonstrations</li><li>2. Practical's to be conducted under faculties guidance.</li></ol>
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Learn develop the principles of biochemistry as applicable to human nutrition and dietetics.

On-line resources to be used if available as reference material
On-line Resources
<a href="http://e-PGPathshala.inflibnet.ac.in">e-PGPathshala (inflibnet.ac.in)</a>

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Bachelor of Science-Home Science  
(B.Sc.- H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04CFDN57	Title of the Course	Food Safety and Quality Control
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Provide a basic understanding of quality concepts and practice in food companies.</li><li>2. Understand the role of Food Safety in expanding food industrial activities.</li><li>3. Acquainted with different types of food hazards, their detection and control through various quality control measures.</li><li>4. Acquainted with the implementation of the total quality control concepts, through techniques such as HACCP.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Food Safety: Definition, Types of hazards affecting Food Safety, Quality Control Concepts as applied to the food industry, General Concepts of quality control and quality control major quality control functions.	30
2.	Industrial food sector in India and the role of quality control in ensuring Food safety.	20
3.	(a) Control of quality parameters to ensure nutritional and health safety of food concepts of quality (b) Quality assurance through HACCP. (c) Legal administration and quality control- Laws relating to food hygiene.	25
4.	(a) Categories of food quality sensory, compositional nutritional and health quality of foods. (b) Quality standards for food- International and national standards.	25

Teaching-Learning Methodology	Chalk and board, Power point presentations, Class Discussions, Class activities / assignments, video clips
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Learn about the importance of HACCP for Quality Assurance in Food industry
2.	Learn about the various agencies and laws working for the betterment of the Food Quality in Industry
3.	Get acquainted with the various food hazards, their detection and control through various quality control measures.

Suggested References:	
Sr. No.	References
1.	FSSAI. (2017). <i>Food Safety and Standards Act 2006</i> , Rules 2011, Regulations 2011.
2.	Mortimore, S., & Wallace, C. (2013). <i>HACCP: A practical approach</i> . Berlin: Springer Science & Business Media.
3.	Nijhawan R. (2017). <i>Food Safety &amp; Standard Act &amp; Food Safety &amp; Standards Rules</i> (1 <sup>st</sup> Edi).
4.	Roday S. (2011). <i>Food Hygiene and Sanitation with case studies</i> .
5.	Hobbs, B. C., & Gilbert, R. J. (1978). <i>Food poisoning and food hygiene</i> . London: Edward Arnold (Publishers) Ltd, 41 Bedford Square.
6.	Bhat, R. V., & Rao, R. N. (1997). <i>Food regulation. Food Safety</i> , Bangalore: The Bangalore Printing and Publishing Co. Ltd.





On-line resources to be used if available as reference material

On-line Resources

[e-PGPathshala \(inflibnet.ac.in\)](http://e-PGPathshala.inflibnet.ac.in)

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Bachelor of Science-Home Science  
(B.Sc. - H. Sc.) (Foods and Nutrition) Semester (IV)

Course Code	UH04SFDN51	Title of the Course	Practical-Computer Application in Foods and Nutrition
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	1. Acquire knowledge of a computer and use of software. 2. Develop ability in use of various software in the field of nutrition.
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Course Content		
Unit	Description	Weightage* (%)
1.	Overview on basic functions in Computer and Application of M.S. word.	10
2.	Implementation of Excel tool for Statistical Analysis – t test, regression, co-relation etc.	20
3.	Formatting Data : Changing column: Width and row height,. Aligning work sheet data , Formatting fonts , Changing number formats , Formatting dates , Adding borders and colours	20
4.	Charting data : What are charts?, Creating charts , Selecting the chart type , Modifying a chart , Creating a chart sheet , Simple data analysis- coding and graphs	10
5.	Application of Diet Software in Foods and Nutrition	20
6.	Preparation of slides in power point : Adding clip art to slides , Insert pictures in slides , Setting time for slides show	10
7.	Use of internet Web search for updated information: Net surfing specific topics related to the subject including the latest advances.	10





Teaching-Learning Methodology	Demonstration Method, Observational method, Brainstorming method
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Learn to use skill of Computer.
2.	Develop ability for the use of various software related to nutrition and health.

Suggested References:	
Sr. No.	References
1.	<a href="http://www.bmi-calculator.net/waist-to-hip-ratio">www.bmi-calculator.net/waist-to-hip-ratio</a>

On-line resources to be used if available as reference material
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Bachelor of Science - Home Science  
(B.Sc.- H. Sc) (Home Science) Semester (IV)

Course Code	UH04EHSC51	Title of the Course	Event Management
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Make them understand the event planning process.</li><li>2. Inculcate the management skills required for managing an event effectively.</li><li>3. Find out the resources required in the staging of events.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Event Planning (a) Concept (b) Role of an event planner: Tasks and Skills (c) Types of Events: Corporate Events, Leisure Events, Sport Events, Private Events	25
2.	Event Planning Process (a) Establishing a theme (b) Settling objectives (c) Determining the venue feasibility (d) Preparing an event management plan (e) Key steps in event marketing	25
3.	Event Budget (a) Preparing a budget (b) Monitoring the budget (c) Budget review	25
4.	Detail planning of a specific event: corporate/ leisure/private	25

Teaching-Learning Methodology	Power point presentations, Videos, Field visits, Assignments, Participatory lectures, Discussions and display of various themes, lectures, tutorials, library use and e-learning through videos coupled with market survey, field-based learning
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Appraise the role of a successful event planner.
2.	Execute a successful event in-line with the needs and requirements of the client.

Suggested References:	
Sr. No.	References
1.	Conway, D.G. (2009). <i>The Event Manager's Bible: The Complete Guide to Planning and Organising a Voluntary or Public Event</i> . New Delhi: Viva Books.
2.	Kilkenny, S. (2006). <i>The complete guide to successful event planning</i> . New Delhi: Atlantic Publishing Company.
3.	Alex, G. (2015). <i>Event Planning: Management and Marketing for Successful Events</i> . New Delhi: Create space Independent Publication.
4.	Sharma, S. (2011). <i>Event Planning and Management</i> . Jaipur: Aadi Publications.
5.	Patel, S.& Saini, A.(2019). <i>Event Management by Homemakers</i> . New Delhi. Authorpress Publication

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Bachelor of Science - Home Science  
(B.Sc.- H.Sc.) (Home Science) Semester (IV)

Course Code	UH04EHSC52	Title of the Course	Counselling Techniques
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Sensitize the students towards the need and value of counselling.</li><li>2. Understand the counselling process and its needs.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Concept of counselling : (a) Meaning (b) Definition (c) Characteristic of Counsellor (d) Elements of counselling (e) Principles of counselling (f) Need of counselling	25
2.	Goals of counseling : (a) Characteristics of an effective counsellor (b) Values in counselling	25
3.	The counselling process : (a) Techniques of counselling (b) Personal problems & Counselling (c) Counselling for school children	25
4.	Approaches to counselling : (a) Development counselling (b) Reality therapy (c) Rational emotive counselling	25

Teaching-Learning Methodology	Lecture method, Group discussions Method, Power Point Presentation , Audio Visual methods, Assignment, Quiz
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand importance of counselling in reducing the problems of an individual.
2.	Know about counselling techniques.

Suggested References:	
Sr. No.	References
1.	Sharma R.A. (2010). <i>Fundamentals of Guidance and Counseling</i> , Meerut (U.E) : R. Lall Book Depot, Near Govt, Inter College.
2.	Singh K. (2010). <i>Counseling Skills for Managers</i> , New Delhi: PHI Learning Pvt. Ltd.
3.	Chatarvedi R. (2007). <i>Guidance and Counseling Skills</i> , New Delhi: Crescent, Publishing Corporation.
4.	Mary S. & Vishala SND. (2008). <i>Guidance &amp; Counseling</i> , S. New Delhi: Chand & Company Ltd. Ram Nagar.

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Bachelor of Science – Home Science  
(B.Sc.-H.Sc.) (Home Science) Semester (IV)

Course Code	UH04EHSC53	Title of the Course	Fashion Basics
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Enable students with concepts of fashion and fashion world.</li><li>2. Develop an understanding of the factors affecting fashion and fashion cycle.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to fashion (a) Meaning (b) Terminologies (c) Areas of fashion design	20
2.	History and life cycle of fashion: (a) History of fashion design (b) Fashion life cycle	20
3.	Factors affecting fashion (a) Accelerating fashion (b) Receding fashion (c) Fashion tourism	30
4.	Theories of fashion change (a) Trickle down theories (b) Trickle up theories (c) Trickle across theories	30

Teaching-Learning Methodology	Lecture, Power Point Presentations, Short Films, Field Visits, Projects, Group Discussion.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Acquaint with the terms and areas of fashion.
2.	Understand the cycle of fashion.
3.	Appraise the influences of fashion world.

Suggested References:	
Sr. No.	References
1.	Patrick, J. (1976). <i>Introduction to Fashion Design</i> , Ireland: B.T. Bradford.
2.	Patrick, J. (1975). <i>Basic Fashion Design</i> , Ireland: B.T. Bradford.
3.	Sumathi, G.J. (2002). <i>Elements of Fashion Design and Apparel Design</i> , New Delhi: New Age International Publishers.
4.	Alexander, R.R. (1977). <i>Textile Products, Selection, Use &amp; Care</i> , Boston: Houghton Mifflin Co.
5.	Pandit, S. & Elizabeth, T. (1972). <i>Grooming Selection &amp; Care</i> , Baroda: Unity Printers.

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Bachelor of Science-Home Science  
(B.Sc.-H. Sc.) (Home Science) Semester (IV)

Course Code	UH04EHSC54	Title of the Course	Geriatric Nutrition
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	1. Know the concepts of gerontology and problems related to old age. 2. Know principles of geriatric nutrition.
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Definition of ageing, senescence, gerontology, geriatrics, and Geriatric nutrition (b) Classification of old population	25
2.	Physiological and Biochemical changes during old age and major nutritional and health problems during old age.	25
3.	Assessment of nutritional status of older adults – Height, Weight, BMI, Demispan formula Demiquet and Mindex formula, Skiding board blade caliper to measure knee ht	25
4.	Nutritional requirement and dietary guidelines for elderly	25

Teaching-Learning Methodology	Classroom teaching for theory periods, Lectures and Power-point presentations will be the main method of transaction, Special lectures/ visits/ interactions with professionals will be undertaken, Classroom quiz sessions for revision, Any other method may be added, as per university norms and discretion of the teaching faculty.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%





3.	University Examination	70%
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Course Outcomes: Having completed this course, the learner will be able to

1.	Comprehend the mental and physical health problems.
2.	Assess nutritional status and apply the knowledge to practical purpose as in planning diets and taking general care.

Suggested References:

Sr. No.	References
1.	Begum, R. M. (2008). <i>A Textbook of Foods, Nutrition &amp; Dietetics</i> . New Delhi: Sterling Publishers Pvt. Ltd.
2.	Antia, F. P. (1973). <i>Clinical Dietetics and Nutrition</i> . London WI: Oxford University Press, Ely House, 37 Dover Street.
3.	Srilakshmi, B. (2007). <i>Dietetics</i> . New Delhi: New Age International.
4.	Mudambi, S. R. (2007). <i>Fundamentals of foods, Nutrition and Diet Therapy</i> . New Delhi: New Age International

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