

SARDAR PATEL UNIVERSITY, VALLABH VIDYANAGAR
B.Sc. Home Science
(Under Choice Based Credit Scheme)
Semester - SIXTH (FOODS AND NUTRITION) YEAR 2023-2024

Sr. No.	Course Type	Course Code (10)	Name of Course	Theory (T) Practica	Credit	Contact hrs/ week	Exam Duration in hrs	Marks		
								Internal	External	Total
1	Ability Enhancement Courses	UH06AH	Interperso	T	2	2	2	15/5	35/14	50/20
2	Core Courses	UH06CF	Food Pro	T	4	4	3	30/10	70/28	100/40
3		UH06CF	Basic Foc	T	2	2	2	15/5	35/14	50/20
4		UH06CF	Basic Foc	P	2	4	3	15/5	35/14	50/20
5		UH06CF	Food Pro	T	2	2	2	15/5	35/14	50/20
6		UH06CF	Food Pro	P	2	4	3	15/5	35/14	50/20
7		UH06CF	Medical I	T	2	2	2	15/5	35/14	50/20
8		UH06CF	Medical I	P	2	4	3	15/5	35/14	50/20
9	Skill Enhancement Courses	UH06SF	Internshi p	P	4	8	-	200/66	-	200/80
10	Elective Courses (Any One)	UH06EH	Human R	T	2	2	2	15/5	35/14	50/20
11		UH06EH	Life Skill	T	2	2	2	15/5	35/14	50/20
12		UH06EH	Garment s-Export and Import	T	2	2	2	15/5	35/14	50/20
13		UH06EH	Hygiene a	T	2	2	2	15/5	35/14	50/20
			Total		24	34		350	350	700



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

Course Code	UH06AHSC51	Title of the Course	Interpersonal Communication in Workplace
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. Prepare the students for work place2. Inculcate in them important aspects of leadership3. Help them understand the intricacies of team work at work place.
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Course Content		
Unit	Description	Weightage* (%)
1.	Need for interpersonal skill development (a) Understanding the universal need for developing interpersonal skills (b) How to develop interpersonal skills in a workplace (c) Informal learning	25
2.	Understanding the difference between individuals (a) What is personality (b) The main personality traits and factors (c) Effect of personality traits o job performance (d) How to deal with different personality types (e) Value differences and how to deal with them (f) Different kinds of intelligences (g) Work ethics	25
3.	Interpersonal communication (a) How does communication happen (b) Relationship building (c) Non- verbal communication (d) Overcoming communication barriers (e) Steps to effective communication (f) Diversity in Understanding Cultural differences	25
4.	Team Building (a) Why team work is important (b) Types of teams (c) The advantage and disadvantage of teamwork (d) Role distribution (e) Guidelines for team level communication	25





Teaching-Learning Methodology	Class Discussions/ Demonstrations, Power point presentations, Class activities/ assignments, group discussions, Field visits, chalk and board
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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 workplace strategies
2.	Comprehend the importance of interpersonal skills
3.	Perform better in their workplace

Suggested References:	
Sr. No.	References
1.	Cole, M. & Cole, S. (1993). <i>The development of children</i> . New York: Scientific American Books.
2.	Kumar, A. (2000). <i>Child Psychology</i> . New Delhi: Anmol Pub. Pvt Ltd.
3.	Saraswati, T. S. & Kaur B. (1993) <i>Human Development & Family Studies in India: An agenda for research and policy</i> (PP67-76) New Delhi: Sage Publication.





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

Course Code	UH06CFDN51	Title of the Course	Food Processing
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. Acquaint students with processing of various foods.2. Acquaint the students with food additives fermented foods, role of enzymes in food processing.3. Use the acquired knowledge for entrepreneurial venture.4. Venture in the field of research in Food Processing Industries.
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Cereals and products- (Any two cereals) processing and their products (any two popular products) in detail. (b) Dals and legumes-processing and their products (any two popular pulses and products) in detail.	20
2.	(a) Nuts and Oilseeds –Processing and their products (any two nuts and oilseed and product) in detail. (b) Milk and Milk products- Processing and their products (any two popular products) in detail.	25
3.	(a) Meat, fish and poultry and eggs - Processing and their products (Any one popular Products) in detail. (b) Vegetable and fruits - Processing and their products (any two vegetables and fruits) in detail.	25
4.	(a) Sugar and Jaggery- Processing and their products (any two popular Products) in detail. (b) Beverages-classification, Processing and their products (any two popular Products) in detail.	20
5.	(a) Food Irradiation, principles and applications. (b) Vinegar preparation	10

Teaching-Learning Methodology	Classroom teaching, Lectures and Power-point presentations, Special lectures/ visits/ interactions with professionals.
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	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%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Apply the knowledge gained in food industries.
2.	Use the knowledge of different processing techniques for entrepreneurial purpose.

Suggested References:	
Sr. No.	References
1.	Joshi, V. K., & Pandey, A. (Eds.). (1999). <i>Biotechnology: food fermentation: microbiology, biochemistry, and technology</i> (Vol. 1). Educational publishers & distributors.
2.	Khader, V. (2019). <i>Text book of food science and technology</i> . Indian council of agricultural research.
3.	Bhatia, S.C., <i>Hand book of Food Processing Technology</i> (2008) <i>Hand book of Food Processing Technology</i> volume I published by Atlantic
4.	NIIR Board of Consultants & Engineers. (2016). <i>The complete technology book on processing, dehydration, canning, preservation of fruits & vegetables</i>
5.	Manay, S. N., & Shadaksharaswami, M., (2001). <i>Food Facts and Principles</i> . New Age International (P) Limited, New Delhi, India.





6.	Francis, F. J. (1999). <i>Wiley encyclopaedia of food science and technology</i> . John Wiley and Sons Inc.
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On-line resources to be used if available as reference material
On-line Resources
e-PGPathshala (inflibnet.ac.in)





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

Course Code	UH06CFDN52	Title of the Course	Basic Food Microbiology
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. Understand the nature of microorganisms involved in food spoilage, food infections, and intoxication.2. Know the importance of microorganism in biotechnology.3. Aware of the principles of various methods used in the prevention and control of the microorganisms in food.4. Understand the criteria for microbiological safety in various food operations to avoid public health hazards due to contaminated foods.
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Brief history of microbiology, Introduction to important microorganisms in foods, (b) Microbes used in food biotechnology, fermented foods, probiotics and their benefits.	20
2.	(a) Factors affecting growth of micro-organism-Extrinsic and intrinsic Parameters in brief. (b) Control and destruction of microorganism-physical and chemical methods used in destruction of microorganisms (use of high and low temperature, dehydration, freeze drying, irradiation and disinfectants)	25
3.	Contamination and microorganism involved in different kinds of foods and their prevention in brief. (a) Cereal and cereal products (b) Vegetable and fruits (c) Meat, Fish and poultry (d) Milk and milk products (e) Canned foods	30
4.	Public health hazards due to contaminated food: food borne infections and intoxication- symptoms, mode and sources of transmission and methods of prevention.	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.	Understanding of the attributes of micro-organisms, factors influencing their growth and survival and this course will extend the student's knowledge regarding food microbiology.
2.	Understand the relation of microorganisms to food spoilage, foodborne illness, and intoxications well as fermentation of food.
3.	Discuss the microbiology of different types of food commodities
4.	Compare various physical and chemical methods used in the control of microorganisms.
5.	Explain the significance and activities of microorganisms in food.

Suggested References:	
Sr. No.	References
1.	Frazier, W. C., & Westhoff, D. C. (2013). <i>Food microbiology</i> . New York. McGraw Hill Book Company, 185.
2.	Jay, J. M., Loessner, M. J., & Golden, D. A. (2008). <i>Modern food microbiology</i> . Springer Science & Business Media.
3.	Banwart, G. (2012). <i>Basic food microbiology</i> . Springer Science & Business Media.
4.	Pelzar, M.T. & Reid, R.D. (1978). <i>Modern Food Microbiology</i> . VanNostrand Reinhold company Inc. Microbiology, McGraw Hill book company, New York.

On-line resources to be used if available as reference material
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Syllabus with effect from the Academic Year 2023-2024

<http://egyankosh.ac.in/>

<https://www.lessonplanet.com/>

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





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

Course Code	UH06CFDN53	Title of the Course	Practical – Basic Food Microbiology
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. Demonstrate theory and practical skills in microscopy and their handling techniques and staining procedures.2. Cultivate microorganisms from milk, water and soil samples.3. Familiarize students with concepts of milk quality based on microbial load.
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Course Content		
Unit	Description	Weightage * (%)
1.	Introduction to laboratory, demonstration of different parts of the microscope, the use and care of the microscope and Autoclave	10
2.	Preparation of bacterial smears & simple staining	10
3.	To carry out Differential staining- Gram staining	15
4.	To carry out Metachromatic staining- lactobacilli staining.	15
5.	Preparation of common laboratory media for isolation and cultivation of bacteria, different isolation methods and types of media.	15
6.	To carry out Qualitative analysis of Milk by Methylene blue reduction test	10
7.	To carry out qualitative & quantitative analysis of water.	10
8.	To carry out qualitative & quantitative analysis of soil	10
9.	To study the quality of water using Presumptive test for detection of E-coli. [Multiple tube fermentation test]	05

Teaching-Learning Methodology	Chalk and board, Laboratory handouts, use of technological tools (video clips)
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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.	Describe the characteristics of foodborne, waterborne and spoilage microorganisms, and methods for their isolation, detection and identification.
2.	Know various Culture media and their applications
3.	Know General bacteriology and microbial techniques for isolation of pure cultures of bacteria.
4.	Evaluate different microorganisms through practical in the laboratory

Suggested References:	
Sr. No.	References
1.	Frazier, W. C., & Westhoff, D. C. (2013). <i>Food microbiology</i> . New York: McGraw Hill Book Company, 185.
2.	Jay, J. M., Loessner, M. J., & Golden, D. A. (2008). <i>Modern food microbiology</i> . Springer Science & Business Media.

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

Course Code	UH06CFDN54	Title of the Course	Food Product Development
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. Understand and know various aspects of food product development including Food Science and Technology2. Aware of the process of development of food product.3. Know the importance of Consumer Research, Finance and Communication.
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Course Content		
Unit	Description	Weightage* (%)
1.	New Food Products development: Planning stage-Idea generation, idea screening, definition, classification, characterization, factors in fluency new product development – social concerns, health concerns impact of technology and market place influence (Corporate, market place, technological and governmental influences).	25
2.	(a) Designing new products using need-based perspective. (b) Standardization of new product (c) Designing and evaluation based on sensory criteria	25
3.	Understanding food packaging: (a) Introduction, classification and types of packaging material (i) Classification: Primary, secondary and tertiary packaging (ii) Types: Glass, metal, paper, plastic, laminates, edible packaging, new packing technologies-CAP/MAP, aseptic packaging (b) Packaging design and consumer behaviour (i) Colour (ii) Graphic design (iii) Consumer behavior-purchase habit, motives marketing & prices	25
4.	Food and Nutrition labelling: (i) Introduction of food labelling requirements in India: Food labelling laws and guidelines notified by FSSAI (ii) Types of labelling requirements (a) Mandatory labelling requirements (b) Prominence & place requirements	25





	(iii) Labeling and Nutrition requirement (a) Need of nutrition labelling (b) Listing of ingredients	
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Teaching-Learning Methodology	Chalk and board, Power point presentations, Class Discussions, Class activities / assignments
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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.	Apply the knowledge gained in various situations.
2.	Development new food product which are nutritious, cost effective and marketable

Suggested References:	
Sr. No.	References
1.	Earle, R., & Anderson, A. (Eds.). (2001). <i>Food Product Development: Maximizing success</i> . CRC press.
2.	Fuller, G. W. (2016). <i>New Food Product Development: From Concept to Marketplace</i> . CRC Press.
3.	Aramouni, F., & Deschenes, K. (2014). <i>Methods For Developing New Food Products: An Instructional Guide</i> . D E Stech Publications, Inc.
4.	Moskowitz, H. R., Saguy, I. S., & Straus, T. (Eds.). (2009). <i>An Integrated Approach to New Food Product Development</i> . CRC Press.





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

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

Course Code	UH06CFDN55	Title of the Course	Practical - Food Product Development
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. Identify the processes & stages for new product development from conception to commercialization.2. Understand the technical and scientific data required for product development.3. Provide adequate theoretical background and practical understanding about sensory evaluation of food.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction, Selection of target group for development of new product	10
2.	Market survey of available products- (a) New form / Reformulation (b) Convenient food-Ready-to-cook, Ready-to-eat (c) New packaging of existing products. (d) Innovative products. (e) Creative products.	10
3.	Preparation of questionnaire	10
4.	Standardization of recipe, tapping traditional foods and unconventional sources of foods Preparation method	20
5.	Sensory evaluation of developed products	20
6.	New Product Development (final) and Shelf-life studies.	10
7.	Appropriate packaging and label designing	10
8.	Costing of developed food product Product exhibition and sale	10

Teaching-Learning	Chalk and board, Class Discussions, Class activities / assignments, technology tool
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Methodology	
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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.	Develop products which meeting consumer needs and nutritionally and commercially viable.
2.	Identify, categorize and analyze major trends in product development and understand new products from consumer viewpoint, identify and assess “gaps” in the current and future food market.
3.	Develop a new food product from concept to prototype or pilot-scale production with inclusion of a critical analysis of the quality, safety, shelf-life, packaging, labelling and cost of the product.

Suggested References:	
Sr. No.	References
1.	Fuller, G. W. (2016). <i>New Food Product Development: From Concept to Marketplace</i> . CRC Press.
2.	Craft, E and Saguy I.S. (1991) <i>Food Product Development: From Concept to Market Place</i> . New York: Van Nostrand Reinhold.
3.	Oickle, J. G. (1990). <i>New Food Product Development: From Concept to Marketplace</i> . Ottawa: New product development and value added. Food Development Division, Agriculture Canada.

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

Course Code	UH06CFDN56	Title of the Course	Medical Nutrition Therapy-II
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. Integrate knowledge principles and methods associated with nutrition and dietetics practices to designing specialized dietary regime or meal plan.2. Understand etiology, pathophysiology metabolic changes in organs during disease condition.
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Course Content		
Unit	Description	Weightage* (%)
1.	Nutritional management of Liver Diseases- (a) Viral hepatitis, (b) Cirrhosis of liver (c) Hepatic coma	15
2.	Nutritional management of kidney diseases: (a) Nephritis-Acute and Chronic (b) Nephrotic Syndrome, (c) Nephrolithiasis (d) Renal failure(Acute and Chronic) , dialysis	20
3.	Nutritional management of Cardiovascular System (a) Arthrosclerosis (b) Hypertension (c) Congestive Cardiac Failure	20
4.	Nutritional management of diseases of Pancreas (a) Diabetes Mellitus(IDDM,NIDDM) (b) Pancreatitis	20
5	Etiology, patho-physiology, clinical features, diagnosis and nutritional management of GIT disorders (a) Diarrhoea (b) Constipation (c) Peptic Ulcer (d) Lactose Intolerance (e) IBS	25

Teaching-	Classroom teaching, Lectures and Power-point presentations, Special
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Learning Methodology	lectures/ visits/ interactions with professionals.
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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.	Integrate knowledge of research, principles and methods associated with nutrition and dietetic practices.
2.	Use effective and appropriate communication skills in providing, advice and professional opinion to individuals, groups communities in field of dietetics.

Suggested References:	
Sr. No.	References
1.	Mahan, L.K. & Escott Stump, S. (2013). <i>Krause's Food & Nutrition Therapy</i> , (13 th ed.) Saunders Elsevier
2.	Bagchi, D. & Nair, S. (2018). <i>Nutritional and Therapeutic Interventions for Diabetes and Metabolic Syndrome</i> , (2 nd ed). Academic Press. eBook ISBN: 9780128120088/
3	Raheena. M A <i>Text book of Food Nutrition and Dietetics</i> New Delhi: Sterling Publishers Private Limited. 59 Okhla Industrial Area, phase II.
4.	Antia F.P (2001) <i>Clinical Dietetics and Nutrition</i> New Delhi : (4 th ed) F.P Oxford University Press.
5.	Joshi, S. A. (1995). <i>Nutrition and dietetics</i> . Ahmedabad: McGraw-Hill Education.





6.	Verma, (2018) <i>Food Nutrition and Dietetics</i> New Delhi : CBS Publishers and Distributers
7.	Yadav.A, Arora.M, Swayam.S. (2019) <i>Practical Manual of Nutrition and Dietetics</i> New Delhi : Kalpaz Publications

On-line resources to be used if available as reference material
On-line Resources
e-PGPathshala (inflibnet.ac.in)





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

Course Code	UH06CFDN57	Title of the Course	Practical - Medical Nutrition Therapy-II
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. Learn about different diets other than routine diets.2. Help them to plan and calculate diets according to the disease condition.
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Course Content		
Unit	Planning, calculating nutrients of the following diet according to the specification given	Weightage* (%)
1.	Medical nutrition therapy in (a) Viral Hepatitis (moderate and severe jaundice) (b) Diet in Liver Cirrhosis	20
2.	Medical nutrition therapy in Renal disorders (a) Diet in Acute and Chronic Nephritis(any one) (b) Diet in Nephrotic Syndrome (c) Diet in Kidney Stones. (d) Diet in Chronic Renal Failure	20
3.	Medical nutrition therapy in cardiovascular disorders (a) Diet in Hypertension (b) Diet in Atherosclerosis	20
4.	Medical nutrition therapy in Pancreatitis (a) Diet for IDDM Patient (b) Diet for NIDDM Patient	20
5	Medical Nutrition Therapy in GIT disorders (a) Diarrhoea (b) Constipation (c) IBS (d) Lactose Intolerance	20

Teaching-Learning Methodology	Laboratory work for planning, preparation and serving of food products, Extension activities will be encouraged for application-oriented learning. 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 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.	Integrate knowledge of principles of diet therapy and research learn about specialized diets other than routine diets.
2.	Plan and calculate diets according to the disease condition.
3.	Take an entrepreneurial approach to advocate for a healthy society.

Suggested References:	
Sr. No.	References
1.	Mahan, L.K. & Escott Stump, S. (2013). <i>Krause's Food & Nutrition Therapy</i> , (13 th ed.) Saunders Elsevier
2.	Bagchi, D. & Nair, S. (2018). <i>Nutritional and Therapeutic Interventions for Diabetes and Metabolic Syndrome</i> , (2 nd ed). Academic Press. eBook ISBN: 9780128120088/
3.	Raheena. M A <i>Text book of Food Nutrition and Dietetics</i> New Delhi: Sterling Publishers Private Limited. 59 Okhla Industrial Area, phase II.
4.	Antia F.P (2001) <i>Clinical Dietetics and Nutrition</i> New Delhi : (4 th ed) F.P Oxford University Press.
5.	Joshi, S. A. (1995). <i>Nutrition and dietetics</i> . Ahmedabad: McGraw-Hill Education.
6.	Verma, (2018) <i>Food Nutrition and Dietetics</i> New Delhi : CBS Publishers and Distributers
7.	Yadav.A, Arora.M, Swayam.S. (2019) <i>Practical Manual of Nutrition and Dietetics</i> New Delhi : Kalpaz Publications





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

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

Course Code	UH06SFDN51	Title of the Course	Practical - Internship
Total Credits of the Course	04	Hours per Week	08

Course Objectives:	<ol style="list-style-type: none">1. Explore career alternatives prior to graduation.2. Integrate theory and practice to develop specific experiences in workplace and community3. Assess interests and abilities in their field of study.4. Learn to appreciate work and its function in the economy.5. Develop work habits and attitudes necessary for job success.6. Develop communication, interpersonal and other critical skills in the job interview process.7. Build a record of work experience.8. Acquire employment contacts leading directly to a full-time job following graduation from college.9. Field/Project/Internship/Community engagements are designed to expand the depth and breadth of academic learning in particular areas of study.
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Course Content		
Unit		Weightage* (%)
1.	The internee would work for period of three weeks in any one setting such as a) Multispecialty hospital b) ICDS centres. c) Women welfare organization d) Food industries e) Canteens of Industries f) Government health sectors	50
2.	Report writing at the end of the training period.	25
3.	Presentation and Evaluation	25

Teaching-Learning	Extension activities will be encouraged for application-oriented learning.
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Methodology	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 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.	Put into practice the knowledge gained in this discipline
2.	Use this knowledge for start-ups.
3.	Apply knowledge skill experience to world environment.
4.	Develop strong networking/mentoring relationship
5.	Acquire new learning through challenging and meaningful activities.





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

Course Code	UH06EHSC51	Title of the Course	Human Resource Management
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. To familiarize students with the concept of human resource management and development.2. To comprehend functions of human resource development.3. To sensitize students towards challenges of human resource managers.4. To acquaint the students with manpower planning and recruitment.5. To familiarise with the Labour welfare laws and procedures.
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Course Content		
Unit	Description	Weightage* (%)
1.	Human Resources Management (a) Concepts: Functions, roles, skills and competencies. (b) Structure of HRD: Structure of the department; The role of human resource manager. (c) Challenges of HR: Globalization, cultural environment, work force diversity, technological changes.	20
2.	Human Resource Planning (a) Manpower planning: Objectives, elements, advantages, Job description and job specification; Job analysis and evaluation (b) Recruitment: Sources, factors affecting, policy and evaluation (c) Selection process (d) Placement and Induction	30
3.	Training and Development (a) Need and areas of training (b) Training Process (c) Performance appraisal and development	30
4.	Laws Governing Staff Planning and Management	20





	(a) Employee laws (b) Trade union contracts and negotiations	
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Teaching-Learning Methodology	PowerPoint presentations, Lectures, Discussions, ICT enabled teaching
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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 human resource management, functions and development.
2.	Gain insight into challenges of human resource managers.
3.	Summarize the objectives of Human Resource planning, Recruitment and selection process.
4.	Understand the process involved in placement, training and development activities.
5.	Understand the characteristics of an effective appraisal system and compensation planning.
6.	Understand the issues related to employee welfare, grievances and discipline.

Suggested References:	
Sr. No.	References
1.	Rao, V.S.P. (2010). <i>Human Resource Management</i> . New Delhi: Excel books.





2.	Cynthia, D. Fisher (2010). <i>Human Resource Management</i> . Chennai: 3/e, AIPD.
3.	Snell, Bohlander and Vohra (2012). <i>Human Resource Management</i> . A South Asian Perspective, 16th Rep., Cengage Learning.
4.	Lawrence, S., Kleeman, Biztantra, (2012). <i>Human Resource Management</i> . New Delhi: Dreamtech Press India Pvt. Ltd.
5.	Aswathappa, K. (2011). <i>Human Resource Management</i> . New Delhi: Himalaya Publishing House.

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

On-line Resources

https://en.wikipedia.org/wiki/Human_resource_management

<http://www.whatishumanresource.com/human-resource-management>





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

Course Code	UH06EHSC52	Title of the Course	Life Skills Development
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. Develop insight into life skills and its crucial role in coping with challenges and improving quality of life.2. Comprehend the core life skills and learn strategies to develop these skills in self as well as others through life skills education.3. Learn the components, principles and skills to design and implement effective life skills education programme.
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Course Content		
Unit	Description	Weightage * (%)
1.	<p>Concept and Meaning of Life Skills</p> <p>(a) Definitions and concept of life skills and life skills education</p> <p>(b) Importance of life skills for overall wellbeing and value of life skills education.</p> <p>(c) Core life skills: classification, concepts and strategies to enhance these skills. Understanding what are life skills meaning & usefulness</p> <p>(d) Need for life skills in today's world</p> <p>(e) Preparing and dealing with changes.</p>	25
2.	<p>Driving our own growth.</p> <p>(a) Motivation: meaning need & sources</p> <p>(b) Development positive thinking</p> <p>(c) Benefits of positive thinking</p> <p>(d) Mind power: Meaning, benefits of meditation</p> <p>(e) Incorporating 10 important life skills recommended by WHO (self-awareness, empathy, critical thinking, creative thinking, decision making, problem solving, effective communication, interpersonal skills, coping with stress and coping with emotions) while preparing the Life Skills Education programmes/curriculum/modules while ensuring their age appropriateness and cultural and contextual relevance. Skills for self: critical thinking skills, decision making skills, interpersonal</p>	25





	communication skills, coping with stress and emotions; self-management skills, ability for empathy and compassion.	
3.	Stress management: (a) Understanding stress (b) Techniques to manage stress (c) Understanding relation between life goals, motivation, productivity and stress. (d) Leadership skills: Key characteristics of leader, self-confidence, assertiveness, trustworthiness, morality, emotional, stability, emotional sense of humors, self-awareness, objectivity, developing of teamwork skills, decision making, emotional stability.	25
4.	Importance of Communication in Imparting Life Skills Education (a) Concept and importance of communication · (b) Effective communication strategies for impactful life skills education programme (effective listening, speaking, building and maintaining relationships, understanding group dynamics and functioning in groups, delegating responsibilities) (c) Communicating with the audience: receiving feedback, handling questions, etc.	25

Teaching-Learning Methodology	Lecture method, Group discussions Method, Power Point Presentation, Audio Visual methods, Games Seminar, 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.	Explain importance of life skills education from individual, interpersonal, familial and societal perspectives.
2.	Develop personal & professional growth.
3.	Help in improvement of personality.
4.	Enhance employability.

Suggested References:	
Sr. No.	References
1.	Nishitesh, Dr. Bhaskara Reddy (2012). <i>Soft Skills & Life Skills</i> . Hyderabad: B Sc publishers.
2.	Rao, M.S. (2010). <i>Soft Skills, Enhancing Employability</i> . New Delhi: Connecting campus with corporate, IK International Pvt. Ltd.
3.	Schulz, B. (2008). <i>Importance of soft skills</i> . Education beyond Academic Knowledge.





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

Course Code	UH06EHSC53	Title of the Course	Garments-Export and Import
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. Make students aware of garment import & export marketing techniques.2. Acquire knowledge of textile policies in India.3. Develop insight in quality assurance of apparel & textile products.
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Introduction to export & import management (b) Management function	20
2.	Finance function (a) Nature & Scope (b) Methods of financing (c) Financial planning	20
3.	Policies in apparel & textile export (a) Government (b) Nongovernment	15
4.	Business System (a) Laundering a proprietorship (b) Joint stock company (c) Cooperatives (d) Partnership	25
5.	Quality Control in apparel & textile units (a) Importance (b) Stages of Quality Control in Industry (c) Role of Information technology	20

Teaching-Learning Methodology	Lectures , demonstrations, videos, role plays, visits
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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

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|----|---|
| 1. | Work in the field of export and import of textiles. |
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Suggested References:

Sr. No.	References
1	Kothary, V.K.(1999); <i>Progress in Textiles & Quality Management</i> . New Delhi: Lafi Publicios
2	Grover, E.B. & Hamby D. S. (1988); <i>Hand Book of Textiles Testing and Quality control</i> (2 nd Ed). New Delhi: Wiley Eastman Ltd.
3	Angappan, P. (2002); <i>Textiles Testing</i> . Tamil Nadu: SSMIIT.
4	Basu, A. (2001). <i>Textile Testing Fibre, Yarn & Fabric</i> . Coimbatore: The South India.
5	Booth, J.E (1996). <i>Principles of Textiles Testing</i> . Delhi: CBS Publication,





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

Course Code	UH06EHSC54	Title of the Course	Hygiene and Sanitation
Total Credits of the Course	02	Hours per Week	02
Course Objectives:	1. Develop correct habits of personal and environmental hygiene. 2. Students can learn safe handling of food and ensure complete safety of raw and processed foods.		

Course Content		
Unit	Description	Weightage* (%)
1.	Definition of hygiene its application to everyday life. Personal hygiene care of skin, hair, hands feet, teeth, use of cosmetics and jewellery, uniform, medical check-up, good food handling habits and training	15
2.	(a)Basic Principles of Food Safety: Definition, Sources of contamination, difference between food poisoning and food infection. (b)Safety in food processing (a) Food procurement (b) Storage (c) Handling (d) Preparation	30
3.	Disinfections – Definition of disinfectant, sanitation, antiseptic and germicides, common disinfectants, use in case of working surfaces. Plant equipment's, dish washing, hand washing etc., and sterilization of plant equipment's.	25
4.	(a)Care of premises and equipment's–Impervious washable floors and walls, table tops, floors etc. Good ventilation and lighting care of dark corners, crevices and cracks. (b)Garbage disposal – Collection storage and proper disposal from the premises including effluents. (c) Control and eradication of flies, cockroaches, rodents and others pests	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.	Knowledge of personal and industrial hygiene and sanitation.
2.	Information regarding storage and care of food and equipment.
3.	Aware about legal standards related with food hygiene.

Suggested References:	
Sr. No.	References
1.	Hobbs B.C. and Gilbert (1970): <i>Food Poisoning and Food Hygiene</i> , Edward Arnold , London.
2.	Graham-Rack, B., & Binsted, R. (1973). <i>Hygiene in food manufacturing and handling</i> .
3.	Marriott, N. G., & Robertson, G. (1997). <i>Essentials of food sanitation</i> . Berlin: Springer Science & Business Media.
4.	Roday, S. (1998). <i>Food hygiene and sanitation</i> . Ahmedabad: Tata McGraw-Hill Education.

On-line resources to be used if available as reference material
On-line Resources
e-PGPathshala (inflibnet.ac.in)

