

**SARDAR PATEL UNIVERSITY
VALLABH VIDYANAGAR**

Programme outcome:

The programme outcome of M.Sc. (Home Science) is to instill professional, practical and entrepreneurship skills for improvement in the quality of life of family and community.

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VALLABH VIDYANAGAR**

Course specific outcome (General Home Science):

- The programme provides knowledge to understand various approaches to family and community care.
- To acquaint the students with the basic knowledge related to Foods and Nutrition, Human Development, Textiles and Clothing, Family Resource Management and Extension through theoretical and practical skills.
- To familiarize the students with government programs and schemes related to the welfare of family and community.
- To impart field work experience to identify problems and their probable solutions related to community.
- To train the students to take up jobs in nutrition related state, national and international health and welfare programmes.
- To acquire skills to undertake systematic and independent research in various areas of Home Science.



SARDAR PATEL UNIVERSITY
Programme – M.Sc.
(Under Choice Based Credit Scheme)
Structure with effect from: 2022-23



M.Sc. H.Sc. General Home Science
III Semester

	C/ E *	Course No	Title	T/P	Credi ts per week	Contact hrs/ week	Exam Duration in hrs	Marks		
								Internal	External	Total
Core Course										
1	C	PH03CGEN51	Research Methodology and Scientific Writing	T	2	2	2	15/5	35/14	50/20
2	C	PH03CGEN52	Practical - Scientific Writing	P	1	2	--	25/10	--	25/10
3	C	PH03CGEN53	Food Service and Hospitality Management	T	4	4	3	30/10	70/28	100/40
4	C	PH03CGEN54	Textile Science	T	4	4	3	30/10	70/28	100/40
5	C	PH03CGEN55	Practical- Textile Analysis and Design	P	2	4	4	15/5	35/14	50/20
6	C	PH03CGEN56	Theories and Concepts in Resource Management	T	4	4	3	30/10	70/28	100/40
7	C	PH03CGEN57	Practical – Management of Family Resources	P	2	4	4	15/5	35/14	50/20
8	C	PH03CGEN58	Seminar	-	2	4	--	50/20	-	50/20
Elective Course (any one from 10 and 11)										
9	E	PH03EGEN51	Nutrition during life cycle	T	4	4	3	30/10	70/28	100/40
10	E	PH03EGEN52	Food Safety	T	4	4	3	30/10	70/28	100/40
		Total			25	32		240	385	625

Note: Students have to choose any one elective theory course.



(Master of Science –Home Science) (General Home Science)
(M.Sc.- H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN51	Title of the Course	Research Methodology and Scientific Writing
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none">1. To understand significance of research in Home Science2. To understand sampling methods and techniques.3. To understand types of researches and develop the ability to construct data gathering tools appropriate to research design4. To gain knowledge regarding scientific writing in research report presentations.
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Course Content		
Unit	Description	Weightage* (%)
1.	Basic concepts of research: Introduction, Meaning, Objectives, Characteristics, Requirements for a Scientific Research, Types of Researches: Exploratory and Descriptive	15
2.	Research Problem: Introduction, Selecting the Problem, Defining the Problem, Sources of Problem, Criteria for Selection of the Problem, Delimiting a Problem, Process of Formation of a Research Problem	20
3.	Research design and Hypothesis Formulation: (a) Meaning of Research Design, Types of Research Designs (exploratory, descriptive, diagnostic, experimental) (b) Hypothesis, Sources of Hypothesis, Forms of Hypothesis	15
4.	Sampling methods and techniques: Meaning and Definition of Population and Sampling, Techniques of Sampling (probability and non-probability)	15
5.	Data collection and Measurement: (a) Types of data: Secondary and Primary (b) Methods of Primary data collection: Observation, Personal Interview, Questionnaire, Schedule, Case Study, Social Survey, Field study, Field experiment, Scaling measurement: types of measurement scales	20
6.	Organization of data and presentation:	15





	(a) Coding, Tabulation and Charts (b) Purpose of Report, Essentials of a Good Report, Types of Report Presentations (written, oral, poster), Format of a Report	
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Teaching-Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Discussion on recent updates with examples
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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.	Become better researchers.
2.	Know how to present research report in a systematic manner

Suggested References:	
Sr. No.	References
1.	Kothari, C.K. (1990). <i>Research methodology: Methods and techniques</i> . New Delhi: Wiley Eastern Ltd.
2.	Sarangi, P.(2010). <i>Taxman's research methodology</i> . New Delhi: Taxman Publications (P) Ltd.
3.	Oliver, P. (2008). <i>Writing your thesis</i> . Delhi: Sage Publication.
4.	Hart, C. (2005). <i>Doing your master's dissertation</i> . New Delhi: Vistaar Publications.





5.	Chawla. D and Sondhi. N. (2011), <i>Research methodology concepts and cases</i> . Noida: Vikas Publishing House.
6.	William, N. <i>Your Research project</i> . New Delhi: Vistaar Publications.

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

On-line Resources

<https://www.open.edu/openlearn/money-management/understanding-different-research-perspectives/>

www.guide2research.com

<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827>





(Master of Science –Home Science) (General Home Science)
(M.Sc.-H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN52	Title of the Course	Practical - Scientific Writing
Total Credits of the Course	01	Hours per Week	02

Course Objective:	To understand the nuances of scientific writing and develop skills in presentation of scientific information.
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Course Content		
Unit	Description	Weightage* (%)
1.	Scientific writing as a means of communication (grammar, punctuation and conventions of scientific writing)	15
2.	(a) Sections of a report: Research Paper, Thesis/Dissertation, Poster (b) Steps in writing a report	10
3.	Tables: Drafting titles, subtitles, construction details	15
4.	Graphs- Types, Title, Elements (scales, title, scale captions and key)	15
5.	Citing the references	15
6.	Appendices: Content, Need, Rules for Presentation	10
7.	Writing of proposal (for grants)	20

Teaching-Learning Methodology	Classroom lecture (Black board/ Power Point Presentation), Practice exercises in class, discussions
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Practical Examination (As per CBCS R.6.8.3)	100%





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

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|----|--|
| 1. | Demonstrate knowledge of scientific writing method and style. |
| 2. | Develop research proposal on a topic relevant to their field of study. |





((Master of Science –Home Science) (General Home Science)
(M.Sc.-H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN53	Title of the Course	Food Service and Hospitality Management
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To equip candidates with the knowledge of hospitality management and the services offered.2. To acquire knowledge on the functions of various areas in a Food Service and Hospitality Management.
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Course Content		
Unit	Description	Weightage * (%)
1.	<p>Introduction to Hospitality Industry:</p> <ol style="list-style-type: none">(a) Definition: Hospitality and Hotel.(b) Classification & Categorization of Hotels- Hotel Ownership. A brief account of Commercial Hotels- Residential Hotels, Resort Hotels, Airport hotels, Bed & Breakfast Hotels, Convention hotels, Casino Hotels, and Motels.	10
2.	<p>Front office Department:</p> <ol style="list-style-type: none">(a) Basic Functions of front office.(b) Layout of front office.(c) Guest cycle.(d) Hierarchy chart: Small, medium and Large hotels, Job description and Job specification.(e) Coordination with other departments.(f) Basic reservation system -Procedures of check- in and check-out, VIP Procedures, Cancellation.	25
3.	<p>Role of Housekeeping in Hospitality Operations:</p> <ol style="list-style-type: none">(a) Importance and Objectives of housekeeping.(b) Hierarchical position of Housekeeping and their roles & responsibilities.(c) Layout of housekeeping department.(d) Areas in housekeeping department: Linen and uniform room (Layout and physical features, Types of linen & uniform & their	15





	selection, Storage, Stock determination, control and distribution) and Laundry(Layout, On-off premises laundry-advantage and disadvantage, Laundry procedure, Stain removal (e) Work schedule, types of shifts, Record keeping.	
4.	Introduction to Food Service Management: (a) History & Development Food service establishments. (b) Objectives, Principles & Functions of Food service management. (c) Layout and equipment for foods services, Sanitation and hygiene in handling foods (d) Types-commercial and non-commercial, their characteristics. (e) Contribution of food service institutions in meeting socioeconomic and dietary needs. (f) Managerial problems in food service establishment.	25
5.	Meal Services Management: (a) Types of Meal service (English / Silver, American, French, Russian Self Service – Buffet & Cafeteria, Laying the Table and Etiquette & Manners). (b) Menu planning for industrial canteen, hospital canteen, cafeteria, snack bar, residential hostel. (c) Standardization of recipes suitable for fast food outlet, industrial canteen, hospitals, college hostel , Utilization of left over foods (d) Quantity food production: Principles involved in development of recipes in large scale cooking.	20
6.	Visit to canteen attached to hospital and dietary department cafeteria, 3 star hotel/restaurant, 5 star hotel / restaurant, industrial canteen and prepared a report on hospital canteen, cafeteria, 3 star hotel / restaurant, 5 star hotel / restaurant in terms of organizational set up, production, preparation and service.	05

Teaching-Learning Methodology	Power point Presentation, Classroom lectures, Project.
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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 role of the housekeeping department in hotel operations and coordination with other departments.
2.	Learnt to plan different menus, lay tables for different services.

Suggested References:

Sr. No.	References
1.	Singaravelavan ,R. (2011). <i>Food & Beverage Service</i> . (1 st ed.). Oxford University Press .
2.	Meti, M.C.(2008). <i>Hotel front office management</i> . Anmol Pub. Pvt. Ltd.
3.	Ridgway, J. (1994). <i>The catering management Handbook</i> . Koganpage Ltd.
4.	Jones, P., & Merricks, P. (1994). <i>The management of food service operations</i> . Cassel. Wellington House.
5	Nathaniel, RS.(1991). <i>Catering management for hotels, restaurants and institutions</i> . Surjeet Publication.
5.	Branson, J., & Lennox, M. (1988). <i>Hotel, hostel and hospital housekeeping</i> .(5 th ed.). Elbs with hodder & Stoughlon book.
6.	Branson, C.J . & Lennox, M.(1988). <i>Hotel and hospital housekeeping</i> . (5 th ed.). London: Redwood Books, Trowbridge Wilsnire.
7.	Jones, P. (1983). <i>Food service operations</i> . Cassell Wellington House.





8.	Andrews, S. (1978). <i>Hotel housekeeping training manual</i> . New Delhi :Tata McGraw Hill publication Co. Ltd.
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On-line resources to be used if available as reference material
On-line Resources
http://epgp.inflibnet.ac.in/Home/ViewSubject?catid=24





(Master of Science –Home Science) (General Home Science)
(M.Sc.- H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN54	Title of the Course	Textile Science
Total Credits of the Course	04	Hours per Week	04

Course Objective:	The course aims to deliver preliminary understanding of fabric components, its testing, dyeing, printing and laundry along with touching upon recent developments
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Fiber: Introduction, Fundamental concepts of fiber polymers, Classification of fibers (b) Processing sequence, physical and chemical properties of natural fibers: cotton, jute, wool, silk (c) Processing sequence, physical and chemical properties of man-made fibers : Regenerated (Viscose Rayon), Synthetic (Nylon, Polyester, Acrylic)	15
2.	(a) Yarn: Twist, Types (b) Fabric constructions: Woven, Knitted, Non woven (c) Loom and loom mechanics: introduction, brief description of basic loom (d) Woven design fundamentals: introduction, classification (simple and compound structures) (e) Weaves: plain and its variations, twill and its variations, satin and sateen weave	15
3.	Textile testing and quality control: (a) Need for textile testing, standard conditions for testing (b) Fiber testing: fineness, length (c) Yarn testing: Types of yarns, Linear Density, Direction of Twist, Measurement of Twist (d) Fabric testing: Count, Weight per unit area (GSM), Width, Skewness, Stiffness, Crease Recovery, Shrinkage, Pilling	25
4.	(a) Dyes : classification, general properties, simple equipments used for dyeing, theories of dyeing, properties and application methods for common dyes(acid, basic, direct, azoic, disperse, mordant, reactive, vat) (b) Printing: Styles(direct, discharge, resist), General steps for	25





	preparation of fabric, Methods (stencil, block, screen, roller, transfer)	
5.	Laundry work :Soaps and Detergents, Action of soap in cleaning, Other laundry reagents (stiffeners, blues, bleaches, grease removers), Stain removal (ink, curry, grass, lipstick, nail paint, grease, tea, coffee, fruit, butter, iron rust)	10
6.	Recent Developments: Nano textiles, Technical Textiles	10

Teaching-Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Discussion on recent updates with examples	
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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.	Know the basics of textiles, textile testing, dyeing and printing
2.	Have enhanced knowledge regarding laundry science
3.	Have improved basic knowledge regarding recent developments in the area of textiles





Suggested References:	
Sr. No.	References
1.	Wynne, A. (1997). <i>The motivate series- Textiles</i> . London: Macmillan
2.	Yadav, S. (1997). <i>Textbook of textile and laundry</i> . New Delhi: Anmol Publishers Pvt. Ltd.
3.	Dantiyagi, S. (1987). <i>Fundamentals of textiles and their care</i> . New Delhi: Orient Longman.
4.	Gohi, E.P.G. and Vilensky, L.D. (1983). <i>Textile science- An explanation of fibre properties</i> , Delhi: CBS Publishers.
5.	Gokarneshan, N. (2006). <i>Fabric structure and design</i> . New Delhi: New Age International.
6.	Swami, C. (2009). <i>Textile Design- Theory and concepts</i> . New Delhi: New Age International Publishers.
7.	Rastogi, M. (2009). <i>Textile and laundry</i> . New Delhi: Sonali Publication.
8.	Singh, K.V.P. (2015). <i>Introduction to textiles</i> . Ludhiana: Kalyani Publishers.
9.	Corbman, P.B. (1989). <i>Textiles: Fibre to fabric</i> . (4 th ed.) New York: Mc Graw Hill.
10.	Asian Journal of Home Science, Hind Institute of Science and Technology

On-line resources to be used if available as reference material
On-line Resources
Indian Journal of Fibre and textile research, Web of Science
Clothing and Textiles Research journal, Web of Science
https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827
https://www.sciencedirect.com/bookseries/textile-science-and-technology/vol/11/suppl/C
https://textilestudycenter.com/library/





SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))
Syllabus with effect from the Academic Year 2021-2022





(Master of Science –Home Science) (General Home Science)
(M.Sc.-H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN55	Title of the Course	Practical - Textile Analysis and Design
Total Credits of the Course	02	Hours per Week	04

Course Objective:	The course aims to facilitate understanding of textile testing and design
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Course Content		
Unit	Description	Weightage* (%)
1.	Fibre identification tests Microscopic, burning and solubility for cotton, jute, wool, silk, nylon, polyester, acrylic	10
2.	Yarn testing; Tex, Denier, Cotton count, Diameter, Direction of twist, Twist per inch	10
3.	Fabric testing: Weave identification, Fabric count, Weight per unit area, Width of fabric, grain line and skewness, Shrinkage, Stiffness, Crease recovery	25
4.	Plain, twill and satin weaving and graphical presentation	10
5.	Dyeing with direct, basic and acid dyes	10
6.	Designing of samples: Tie-and-dye, Batik, Stencil printing, Block printing	15
7.	Collection of fabric samples showing different textile designing techniques: printing, dyeing, weaving, knitting, fancy yarns, trimmings (sequins, beads etc.) (self learning activity)	10
8.	Stain removal test for ink, curry, grass, lipstick, nail polish, grease, tea, coffee, fruit, butter, iron rust	10





Teaching-Learning Methodology	Classroom explanation (Black board), demonstration and than actual performance by students, discussion of results
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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.	Identify fibres, evaluate yarns and fabrics for their physical properties.
2.	Gain enhanced creativity in textile design.





(Master of Science –Home Science) (General Home Science)
(M.Sc.- H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN56	Title of the Course	Theories and Concepts in Resource Management
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To help students in learning various concepts of resource management.2. To help students learn the basic process of management.
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Course Content		
Unit	Description	Weightage * (%)
1.	Introduction to Management: Concept of management, Definition, Importance, Theories & Approaches of management, Management process- planning- types & importance, Controlling- sub steps in controlling, Evaluation- types.	20
2.	Management of Resources: Definition and its importance of resources, Characteristics of resources, Role of resources in management, Factors affecting the use of resources, Guidelines to increase satisfaction through appropriate use of resources, Types of resources- Human resources and Non-human resources.	20
3.	Factors Motivating Resource Management: Values- Definitions, classification, conflict evidence of values, Goals- Definitions, classification, conflict evidence of goals, Standards- Definitions, classification and Decision Making- Definitions, importance, types, process of decision making, methods of resolving conflicts.	15
4.	Time Management: Meaning and need of time management, Tools in time management- Time cost, Time norms, Peak loads and Work curve and rest period.	15
5.	Energy Management: Meaning and need of energy management, Fatigue: Definition, types and methods to reduce fatigue and Work simplification: Definition, Mundel's classes of changes.	10
6.	Money Management: Income- Definition, Types and their sources: Money income, Real income, Psychic income, Income management-meaning, importance & process of budget making, Expenditure- Definition, Factors Affecting Expenditure and Savings & investment-Definition, meaning, Types &	20





importance.	
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Teaching-Learning Methodology	Power point Presentation, Classroom lectures, Project.
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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, understand and practice for wise use of money.
2.	Understand concepts, principles and functions of management.

Suggested References:	
Sr. No.	References
1.	Varghese & Ogale (1957). <i>Home management</i> . New Age International(P)Ltd.
2.	Bhargava, B. (2003). <i>Family resource management and Interior decoration</i> . Uni Book House Pvt. Ltd.
3.	Gandotra & Shukul . <i>Home management & family finance</i> . New Delhi: Dominant Publisher & Distributor.
4.	Thakkar & Pujara, <i>Introduction to Home management</i> (Gujarati). Rajkot: Praveen Pustak Bhandar.





5.	Nickell & Dorsey (2002). <i>Management in family living</i> , CBS Publishers & Distributors Pvt. Ltd.
6.	Seetharaman, P. <i>An Introduction to family resource management</i> , CBS Pub. & Distributors.

On-line resources to be used if available as reference material
On-line Resources
http://epgp.inflibnet.ac.in/Home/ViewSubject?catid=24
http://ecoursesonline.iasri.res.in/course/view.php?id=218





(Master of Science –Home Science) (General Home Science)
(M.Sc.-H.Sc.) (General Home Science) Semester (III)

Course Code	PH03CGEN57	Title of the Course	Practical – Management of Family Resources
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To understand the importance of budget in day to day life.2. To introduce students to the role of long term and short term goals of family.
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Course Content		
Unit	Description	Weightage * (%)
1	Plan family budget for the major event.	20
2	Survey of five families for understanding their savings & investments.	20
3	Decision making- Identify a problem & solve it by using steps in decision making.	20
4	Case studies/ short studies- Identify values and goals.	10
5	Listing out human and non – human resources, listing community resources.	10
6	Application of management process to organize an event – planning, organization, evaluation.	10
7	Calculate Energy cost of selected activities using heat rate monitor.	10

Course Outcomes: Having completed this course, the learner will be able to	
1.	Identify human and non-human resources for efficient management of the family .
2.	Develop skills to draw a budget within the available income and to maintain accounts.





Teaching-Learning Methodology	Class discussion led by teacher & students and then actual performance by students.
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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%





(Master of Science –Home Science) (General Home Science)
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Course Code	PH03CGEN58	Title of the Course	Seminar
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	1. To provide exposure to better understand advancements in the field of Home Science and to promote self-learning and gaining confidence in presentations.
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Course Content		
Unit	Description	Weightage* (%)
1.	Each student will select two topics related to any area of Home Science	25
2	Each student will review research papers related to the selected topic and will make a presentation.	75

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Continuous Assessment in the form of seminar presentations and attendance (As per CBCS R.6.8.3)	100%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Develop understanding of advancements in the field of Home Science.
2.	Prepare and deliver effective presentations.





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((Master of Science –Home Science) (General Home Science)
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Course Code	PH03EGEN51	Title of the Course	Nutrition during Life Cycle
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To understand the factors affecting meal planning2. To be familiar with nutritional need at different stages of life.3. To understand causes, physiological changes and dietary modification for various disease conditions.
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Course Content		
Unit	Description	Weightage* (%)
1.	Nutrition requirement during infancy : Growth and physiological development during infancy, nutritional requirements of infants, composition and importance of colostrums and breastfeeding, composition of artificial feeding, types of complementary foods	15
2.	Nutrition requirement during childhood and adolescence (a) Childhood: Physiological changes, nutritional requirements and food choices, , points to be considered while planning meal for children (preschoolers and school going children), packed lunch, common nutritional disorders during childhood, nutritional recommendation to overcome nutritional disorders (b) Adolescence: Physiological changes, nutritional requirements, and food choices, points to be considered while planning meal for adolescents, common nutritional disorders during adolescence, nutritional recommendation to overcome nutritional disorders	20
3.	Nutritional requirement during adulthood and special physiological groups in females (a) Adulthood: RDA, points to be considered while planning meal, importance of balanced diet, dietary modifications for adults with diseases. (b) Menopause: stages of menopause, physiological changes, common problems in menopause, nutritional requirement, special foods for menopausal females, points to be considered while planning meal for menopausal female	25





4.	Nutritional requirement during special physiological groups in females (a) Pregnancy: Physiological changes, common problems during pregnancy, nutritional requirement, food choices during pregnancy, points to be considered while planning meal for pregnant female (b) Lactation: Physiological changes, common problems during lactation, nutritional requirement, points to be considered while planning meal for lactating mother	25
5.	Geriatric Nutrition: Physiological changes in old age, nutritional requirements, dietary changes during old age, dietary modifications for elderly with diseases	15

Teaching-Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Group discussion, Discussion with suitable examples.
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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 knowledge related to balanced meal and other factors affecting the meal planning.
2.	Understand the importance different nutritional need at different stages of life.

Suggested References:	
Sr. No.	References
1.	Srilakshmi, B. (2012). <i>Dietetics</i> . (6 th ed.). New Age International Publishers





2.	Srilakshmi, B. (2006). <i>Nutrition Science</i> . New Age International Publishers
3.	Mudambi, S. R. (2007). <i>Fundamentals of foods, nutrition and diet therapy</i> . New Age International.
4.	Khetarpaul, N., Katyal, S. & Grover, I. (2009). <i>Infant health and nutrition</i> . (1 st ed.). Agrotech Publishing Academy.
4.	Mahan, L. K., & Raymond, J. L. (2016). <i>Krause's food & the nutrition care process</i> . Elsevier Health Sciences.
5.	Schlenker, E.D. and Gilbert, J. (2015) <i>William's essentials of nutrition and diet therapy</i> , 11 th Edition, Elsevier Inc.
6.	Roth, R. A. (2013). <i>Nutrition & diet therapy</i> . Cengage Learning.
On-line resources to be used if available as reference material	
On-line Resources	
Kompass Nutrition & Dietetics, Kargers Publishers	
The Journal of nutrition, health & aging, Springer Nature	
https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=444	
https://www.nin.res.in/	





(Master of Science –Home Science) (General Home Science)
(M.Sc.-H.Sc.) (General Home Science) Semester (III)

Course Code	PH03EGEN52	Title of the Course	Food Safety
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To understand the importance of quality and safety of foods2. To know the various preservation methods as well as to understand importance of sanitation and hygiene to prevent food spoilage3. To be familiar with various food laws4. To gain knowledge regarding different types of food adulteration and their detection methods
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Introduction to sanitation and hygiene : Introduction to food safety, sanitation, hygiene, types of hazards (physical, chemical, biological) (b) Personal hygiene of food handler :Importance of personal hygiene, Personal hygiene practices as per FSSA, Personal habits of food handler	20
2.	Microbiological spoilage of food : Types of microorganisms, Contamination of foods, sources of contamination, Food borne illnesses	15
3.	Sanitation and safety of food :Sanitation ,Cleaning and sanitizing methods for kitchen premises, different types of cleaning and sanitizing agents, other safety measures in kitchen, Storage and disposal of waste	15
4.	Handling and storage of food commodities :Classification of foods as per perishability, Points to be considered while receiving food commodities, Preprocessing of food for storage, Different techniques of storage of food, Fifo concept in utility of food	25
5.	Food standards: FSSAI, Agmark, ISO, Codex	15
6	Food adulteration : Introduction, types, adverse effects of food adulteration on health,Different types of adulteration in food and method of detection	10





Teaching-Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Group discussion, Discussion with suitable examples.
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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 and identify different hazards in food.
2.	Role of microorganism and steps to prevent microbial contamination.
3.	Apply the knowledge of sanitation methods and cleaning agents.
4.	Gain the knowledge about different food safety regulations and laws

Suggested References:	
Sr. No.	References
1.	Roday, S. (1998). <i>Food hygiene and sanitation</i> . Tata McGraw-Hill Education.
2.	Frazier, W. C. (2013). <i>Food microbiology</i> . Tata McGraw-Hill Education
3.	Hough, T. (2008). <i>Elements of hygiene and sanitation</i> . BiblioBazaar, LLC.
On-line resources to be used if available as reference material	
On-line Resources	
Food Quality and Safety, Oxford University Press	





<https://www.fssai.gov.in/>

<https://old.fssai.gov.in/Codexindia/index.htm>

<https://www.iso.org/home.html>

<https://agmarknet.gov.in/>

<https://dmi.gov.in/GradesStandard.aspx>

<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=444>

