THE MAHATMA GANDHI UNIVERSITY

UNDERGRADUATE PROGRAMMES (HONOURS) SYLLABUS

MGU-UGP (Honours)

(2024 Admission Onwards)

Faculty : Science

BoS : Home Science

Programme : Bachelor of Science (Honours) Home Science

Mahatma Gandhi University
Priyadarshini Hills
Kottayam – 686560, Kerala, India

CONTENTS

PREFACE

In response to the transformative shift in higher education, universities across the state have embarked on a comprehensive endeavor to conceive the structural framework and devise the regulatory framework for the novel undergraduate curriculum. In adherence to a sequence of academic dialogues, focused workshops, and comprehensive deliberations, Mahatma Gandhi University has undertaken a rigorous process of curriculum design and has meticulously devised the new framework and regulatory guidelines, for imminent implementation.

Mahatma Gandhi University as per the U. O No.11327/AC A9/2023 dated 09.11.2023 entrusted the task of BoS members of Home Science UG and PG combined under the leadership of chairperson and a team of members from affiliated colleges to design the curriculum for Under Graduate Programmes (Honours) 2024. The newly designed course content was designed to take effect from academic year 2024-25 onwards.

The members of the BoS met several times and worked out the format for the proposed design of the UG programme in Home Science as per the guidelines envisaged by the University. The members decided to organize a five-day workshop in connection with the designing of the curriculum. The five-day workshop was conducted from 13.11.2023 to17.11.2023 at St. Teresa's College, Ernakulam; 20 faculty members from different Colleges of Mahatma Gandhi University were attended the workshop.

Home Science is both science and social science-art related multi-disciplinary field of study. The under graduate Home Science (Honours) programme has been designed to integrate the application of sciences and humanities to create a cadre of home scientists to improve the quality of life of individuals, family, community and nation. Home Science program is predominantly practical oriented and therefore helps to develop and polish various skills to empower the cadre required towards innovation, incubation and entrepreneurship along with professional and employable skills. Hands on experience with Project work/internship/fieldwork would help and build capacities for conducting primary research among the students. The curriculum has been structured to prepare the undergraduates to achieve skills to move forward with the development of the society/community/nation and entrepreneurship.

The Curriculum incorporates Major, Minor, Multi-Disciplinary Courses (MDC), Skill Enhancement Courses (SEC), Ability Enhancement Courses (AEC), Value Added Courses (VAC), summer internship/field based learning, research project/ dissertation of various disciplines with Graduate Attributes (GAs) such as disciplinary knowledge, laboratory/field driven practical's, the art of writing & communication, self-learning, critical thinking, analytical & problem solving abilities, use of ICT, application of knowledge, lifelong learning, research-related skills, team spirit, multicultural competencies, leadership qualities, global vision, professional commitment and sensitizing with Sustainable Development Goals (SDGs) of United Nations. It also aims to build future ready professionals who would be socially responsible global citizens contributing to the overall development of the country.

I Specially thank the Vice Chancellor, Syndicate members, Curriculum Committee Members of Mahatma Gandhi University for their instinct encouragement, support and constant guidance during this Syllabus designing processes.

I thank the external experts and all the BoS members for their valuable services during the scrutiny and workshop. I am very grateful to the members of the workshop who have willingly co-operated with me in this venture. I am Thankful to Dr. Sr. Vinitha CSST, Provincial Superior and Manager and Principal, Prof. Dr. Alphonsa Vijaya Joseph of St. Teresa's College, Ernakulam for the assistance given to make this effort a success.

I believe that the newly designed syllabus will greatly contribute to our academic success and foster a more conducive learning environment.

I am glad to present this syllabus to the Mahatma Gandhi University on behalf of BoS Home Science who has whole-heartedly devoted their valuable services.

Mrs. Manjulin Jacob
Chairperson, BoS Home Science, UG and PG combined

BOARD OF STUDIES & EXTERNAL EXPERTS

1. Mrs. Manjulin Jacob, Associate Professor, Assumption College, Changanassery. (Chairperson)
2. Dr. Betty Rani Isaac, Associate Professor, St Teresa's College, Ernakulam. (Member)
3. Mrs. Rose Mary Francis, Associate Professor, St Teresa's College, Ernakulam. (Member)
4. Mrs. Sajitha Suseelan S, Assistant Professor, Morning Star Home Science College Angamaly (Member)
5. Mrs. Sherin Abraham, Assistant Professor, Morning Star Home Science College, Angamaly (Member)
6. Dr. Anooja Thomas. K. Rtd., Associate Professor, CMS College, Kottayam. (Member)
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8. Dr. Seena Gopinathan, Associate Professor, S N College for women, Kollam. (Member)

External Expert for Scrutiny

1. Dr. Mini Joseph, Associate Professor in Home Science, Government College for Women, Thiruvananthapuram.
2. Dr. Miriam Mani, Associate Professor (Rtd), CMS College, Kottayam.

Syllabus Index

Name of the Major: **Home Science**

Semester: 1

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG1DSCHSC100	Perspectives of Home Science - I	DSC A	4	5	3	-	2	-
MG1MDCHSC100	Creative Arts and Crafts	MDC	3	4	2	-	2	-

Semester: 2

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG2DSCHSC100	Perspectives of Home Science - II	DSC A	4	5	3	-	2	-
MG2MDCHSC100	Fashion Fundamentals	MDC	3	4	2	-	2	-

Semester: 3

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG3DSCHSC200	Human Nutrition and Biochemistry	DSC A	4	5	3	-	2	-
MG3DSCHSC201	Child Development	DSC A	4	4	4	-	-	-
MG3DSCHSC202	Mental Well-Being of Adolescents	DSC B	4	5	3	-	2	-
MG3DSEHSC200	1. Fashion Concepts **(Specialization-Textiles and Apparel designing**	DSE	4	5	3	-	2	-
MG3DSEHSC201	2. Landscaping and Gardening							
MG3DSEHSC202	3. Sports Nutrition **(Specialization-Food Nutrition and Dietetics)**							
MG3DSEHSC203	4. Early Childhood Education **(Specialization-Human Development)**							
MG3MDCHSC200	Surface Embellishment Techniques	MDC	3	3	3	-	-	-
MG3VACHSC200	Basics of Counselling	VAC	3	3	3	-	-	-

Semester: 4

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG4DSCHSC200	Interior Decoration	DSC A	4	5	3	-	2	-
MG4DSCHSC201	Dynamics of Extension and Communication	DSC A	4	4	4	-	-	-
MG4DSCHSC202	Food Science and Food Safety	DSC B	4	5	3	-	2	
MG4DSEHSC200	1. Food Science and Quality Control **(Specialization-Food Nutrition and Dietetics)**	DSE	4	5	3	-	2	-
MG4DSEHSC201	2. Participatory Programme Management							
MG4DSEHSC202	3. Apparel Designing **(Specialization-Textiles and Apparel Designing)**							
MG4DSEHSC203	4. Learning Disabilities **(Specialization-Human Development)**							
MG4SECHSC200	Creative Arts in Interior Decoration	SEC	3	3	3	-	-	-
MG4VACHSC200	Women Empowerment and Gender Equity	VAC	3	3	3	-	-	-
MG4INTHSC200	Internship		2					

Semester: 5

Course Code	Title of the Course	Type of the Course.	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG5DSCHSC300	Clinical Nutrition and Dietetics	DSC A	4	5	3	-	2	-
MG5DSCHSC301	Resource Management and Consumer Studies	DSC A	4	5	3	-	2	-
MG5DSCHSC302	Textile Science	DSC A	4	4	4	-	-	-
MG5DSEHSC300	1. Family Studies **(Specialization-Human Development)**	DSE (Any two)	4	4	4	-	-	-
MG5DSEHSC301	2. Applied Extension Education							
MG5DSEHSC302	3. Human Physiology and Microbiology **(Specialization-Food Nutrition and Dietetics)**							
MG5DSEHSC303	4. Fashion Marketing **(Specialization-Textiles and Apparel Designing)**							
MG5DSEHSC304	5. Product Development and Marketing							
MG5DSEHSC305	6. Development Communication							
MG5SECHSC300	1. Surface Ornamentation	SEC	3	3	3	-	-	-
MG5SECHSC301	2. Bakery Skills							
MG5SECHSC302	3. Event Management							

Semester: 6

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG6DSCHSC300	Fundamentals of Garment Construction	DSC	4	5	3	-	2	-
MG6DSCHSC301	Nutrition Through Life Cycle	DSC	4	5	3	-	2	-
MG6DSEHSC300	1. Designing Interior Spaces	DSE (Any two)	4	5	3	-	2	-
MG6DSEHSC301	2. NGO Management							
MG6DSEHSC302	3. Developmental Psychology **(Specialization-Human Development)**							
MG6DSEHSC303	4. Traditional Textiles and Costumes of India **(Specialization-Textiles and Apparel Designing)**							
MG6DSEHSC304	5. Child Health and Nutrition **(Specialization-Food Nutrition and Dietetics)**							
MG6SECHSC300	1. Clothing Care	SEC	3	3	3	-	-	-
MG6SECHSC301	2. Creative Applied Arts							
MG6SECHSC302	3. Women Entrepreneurship Development							
MG6SECHSC303	4. Techniques of Food Preservation							
MG6SECHSC304	5. Food Service Management							
MG6VACHSC300	1. Communication for Development	VAC	3	3	3	-	-	-
MG6VACHSC301	2. Guidance and Counselling							

Semester: 7

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG7DCCHSC400	Advanced Fashion Designing	DCC	4	5	3	-	2	-
MG7DCCHSC401	Advanced Nutrition - 1	DCC	4	4	4	-	-	-
MG7DCCHSC402	Quantity Food Preparation and Food Service Technique	DCC	4	4	4	-	-	-
MG7DCEHSC400	1. Public Health Nutrition	DCE	4	4	4	-	-	-
MG7DCEHSC401	2. Apparel Manufacturing Technology							
MG7DCEHSC402	3. Inclusive Education		4	4	4	-	-	-
MG7DCEHSC403	4. Research Methodology and Statistics		4	4	4	-	-	-
MG7DCEHSC404	5. Community Development							
MG7DCEHSC405	6. Sustainable Resource Management							

Semester: 8

Course Code	Title of the Course	Type of the Course	Credit	Hours/ week	Hour Distribution /week			
					L	T	P	O
MG8DCCHSC400	Early Developmental Stimulation	DCC	4	5	3	-	2	-
MG8DCCHSC401	Hospitality Management	DCC	4	5	3	-	2	-
MG8DCEHSC400	1. Commercial and Residential Space Designing	DCE	4	5	3	-	2	-
MG8DCEHSC401	2. Applied Ergonomics		4	5	3	-	2	-
MG8DCEHSC402	3. Advanced Nutrition – II		4	5	3	-	2	-
MG8DCEHSC403	4. Environment and Human Resource Management		4	5	3	-	2	-
MG8DCEHSC404	5. Functional foods and Nutraceuticals							
MG8DCEHSC405	6. Food Chemistry							
MG8PRJHSC400	Dissertation/ Internship Project	PRJ	12	-	-	-	-	-

SEMESTER-I

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Perspectives of Home Science- I**					
Type of Course	**DSC A**					
Course Code	**MG1DSCHSC100**					
Course Level	**100-199**					
Course Summary	"Perspectives of Home Science I " is a comprehensive course exploring the intersection of design principles, fashion cycles, and essential life skills. Additionally, delve into nutrition with a focus on balanced diets, food classification, cooking methods, and culinary terms. Students can gain practical exposure in design development, surface ornamentation, and food preservation techniques.					
Semester	I	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Interest in design concepts					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Apply design concepts, principles, aesthetic sensibilities effectively.	A	3,4,5
2	Explain fashion concepts, fashion fabrics, surface ornamentation techniques and the dress styles suitable for different body types.	U	1,2,3,
3	Summarize the Fundamental aspects of food science and nutrition.	An	2,4,5,

4	Explain the principles of food preservation, packaging and labeling of foods.	U	3,6.7
5	Exhibit different skills in illustration, surface ornamentation, cooking and preservation techniques	A	8,9
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Design Aesthetics and Principles of Design				
1	1.1	Design-Concept Definition, Classification-types of design Good Taste – Requirements for good design	**15**	CO1
	1.2	Elements of design- Line, shape/form, colour, texture, Pattern, space and light		CO1
	1.3	Principles of design– Harmony, proportion, balance, rhythm, and Emphasis		CO1
Fashion Basics and Fabrics in Fashion				
2	2.1	Basic body types-Hour glass, Triangle, Inverted, rectangle, slim rectangle, wide rectangle	**15**	CO2
	2.2	Stages of Fashion Cycle		CO2
	2.3	Factors influencing fashion		CO2
	2.5	Fashion Fabrics- Crepe, Flannel, Denim, Damask, Knitted, Terry Cloth, Velvet, Muslin, Chiffon, Dupion, Mutka Silk, Satin, Leather and suede, Georgette, Organza, Lace, Net, Non wovens,		CO2
	2.6	Surface Ornamentation techniques - Printing on fabrics, basic hand and embroidery stitches.		CO2
Nutrition and Methods of Cooking				
3	3.1	Definition and terms used in nutrition- Health, Food, Nutrients, Nutrition, Malnutrition, Balanced Diet	**15**	CO3

	3.2	Classification and Functions of food- Physiological, Psychological and Social Functions.		CO3
	3.3	Basic Four Food Groups and its Significance and My Healthy Plate for the day.		CO3
	3.4	An overview of culinary terms. Different modes of heat transfer.		CO3
	3.5	Moist Heat Methods- Boiling Simmering, Poaching, Stewing, Pressure Cooking, Blanching and Steaming. Dry heat methods - Baking, Grilling, Roasting, Sauteing, Frying and air frying method. Combination Methods- Braising and Other methods- Microwave and solar cooking. Merits and Demerits.		CO3
	3.6	Steps In Minimizing Loss of Nutrients During Cooking.		CO3
	3.7	Food preservation- Principles, objectives and methods. Functions of packaging and materials used Food Labelling-Requisites for labelling, Front -of -pack (FOP)labelling.		CO4
Practical				
4	4.1	Illustration of design elements,	**30**	CO5
	4.2	Principles of design- illustration /application		CO5
	4.3	Prang Colour System, and colour harmonies		CO5
	4.4	Printing on fabrics: Block printing, Vegetable block printing, Stencil printing. Basic Embroidery Stitches: Minimum 6 stitches.		CO5
	4.5	Grouping of foods based on nutritive value.		CO5
	4.6	Methods of cooking- Moist, dry, combined and other methods.		CO5
	4.7	Development of a preserved food product and labelling according to FSSAI norms.		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any 1 question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10marks)

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7. Pikunas, J. (1976). *Human Development. An Emergent Science*. New Delhi: McGraw Hill.
8. Chandrasekhar U. (2002), Food Science and its Applications in Indian Cookery, Phoenix Publishing House, New Delhi
9. Vickie A.V. and Elizabeth, W.C., (2005), Essentials of Food Science,2 nd Edition, Springer.

	Mahatma Gandhi University **Kottayam**
Programme	
Course Name	**Creative Arts and Crafts**
Type of Course	**MDC**
Course Code	**MG1MDCHSC100**
Course Level	**100-199**
Course Summary	Introducing students to the discipline of Creative Arts and Crafts is a dire need to divert young minds from too much of academics to lighter enjoyable exercises. It would prove an attempt to initiate in them an opportunity to develop and kindle their senses in fine and applied arts and crafts, a viable avenue for lifelong learning and entrepreneurship.

Semester	I	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		2	-	1	-	**30+30=60**
Prerequisites, if any	Aptitude towards sketching and drawing, artistic and creative mind and a Basic knowledge of design elements.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
After the successful completion of the course the student should be able to:			
1	Appreciate aesthetics of arts and crafts	Ap	3
2	Develop nuances of creative arts and crafts	C	10
3	Inculcate skills through hands–on experience in applied arts for an enjoyable stress-free life experience	S	4, 8
4	Analyse the significance of art concepts as an integral component of man's living styles from bygone days	An	3, 6
5	Customize the use of visual and applied arts, accessories and antiques for designing interiors and other aspects	C	1, 2, 7
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to Art, Visual Art & Design				
1	**1.1**	Meaning and philosophy of Art, Types of Art forms related to Interior design - visual, plastic, decorative, applied arts.	**15**	CO1
	1.2	Design- Basic Concept and Types. Significance of Creativity and Aesthetics in Design development.		CO1
	1.3	Drawings - Methods and Techniques, Ornamentation techniques on drawings		CO2
	1.4	Applied Art and Crafts- Medium and Materials – Paper, Canvas, Cloth, wood, earthenware, ceramics, glass, plastics, metal, etc.		CO3
Applied Arts for Functional/ Aesthetic Design				
2	**2.1**	2D Art: Madhubani, Worli, Kalamkari, Tanjore etc.	**15**	CO2
	2.2	3D Art forms: Sculpting, Pottery, Bottle art, Jewellery making etc.		CO2
	2.3	Creative Art for Accessory design – Collage, Macrame, Pottery, Crotchet, Papier Mache, etc.		CO2
Practical in Creative Arts and Crafts				
3	**3.1**	Basic drawing techniques- Pencil drawing, Charcoal drawing, Cartoon drawing / Caricature, Portrait drawing, Doodling, Rendering, Zentangle (Any 4)	**30**	CO2
	3.2	Basic Painting Techniques - water colour, crayons, oil pastels, oil painting, glass painting, fabric painting (Any 3)		CO2
	3.3	Developing designs from 2D and 3D art forms (Any 2)		CO3
	3.4	Creative Art for Accessory design (Any 1)		CO5
	3.5	Collection and analysis of paintings/ work of art of famous artists, Collection and display of antiques.		CO4
	3.6	Study and Evaluation of Ancient Design and Art forms and Scrapbook preparation.		CO4
4	**Teacher specific content** (This content will be evaluated internally)			
	Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture, Demonstration and practical Assignments	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**15**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**35**
	Practical Examination			**35**

End Semester Examination

Theory: 35 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x1=10)

ii) Short essay type questions: answer any 3 questions out of 5 (3x5=15)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Bhatt, P. (2011). Foundation of Art and Design. Mumbai: The Lakhani Book Depot.
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SEMESTER-II

	Mahatma Gandhi University **Kottayam**					
Programme	**BSc (Hons) Home Science**					
Course Name	**Perspectives of Home Science- II**					
Type of Course	**DSC A**					
Course Code	**MG2DSCHSC100**					
Course Level	**100 -199**					
Course Summary	This course provides a comprehensive understanding of human development, covering the meaning, scope, and stages of growth. It explores the inter-relationship between heredity and environment, emphasizing domains like physical, cognitive, and socio-emotional. Extension Education is discussed with a focus on needs assessments and participatory approaches.					
Semester	II	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Basic knowledge about growth & development of human beings and rural development					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Explain the need, principles and processes underlying growth and development	K	1, 2, 10
2	Describe the methods of child study in research	U	1, 2, 8
3	Understand the definition, importance, objectives and elements of Extension	U	1, 6
4	Recognize the multidisciplinary approach of Home Science and relevance in national development.	U	3, 6
5	Demonstrate Proficiency in Child Development Assessment	An	2, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hours	CO No.
Overview of Human Development				
1	1.1	Meaning, definition, scope, domains and their interrelation	**15**	CO1
	1.2	Principles of growth and development, factors affecting growth and development		CO1
	1.3	Heredity and environment – Interaction		CO1
	1.4	Stages of Development – Infancy, Childhood, Adolescence, Adulthood and Ageing – developmental tasks and characteristics		CO1
	1.5	Domains of development: Physical, motor, language, cognitive, socio-emotional.		CO1
	1.6	Methods of Child Study – Anthropometry, Observation, Interview, Questionnaire, Case study, Projective techniques, Experimental method, Psychological tests, Sociometry, Longitudinal and Cross-Sectional Approach.		CO2
Extension Education				
2	2.1	Definition, importance and objectives of extension.	**15**	CO3
	2.2	Conducting needs assessments in extension education. Elements of extension education.		CO3
	2.3	Steps in extension teaching. Formal, informal & non-formal education and difference between formal and Extension education process		CO3
	2.4	Participatory approach in extension education.		CO3
Multi-disciplinary approach of Home Science				
	3.1	Multidisciplinary approach of Home Science, Disciplines of Home Science	**15**	CO4
	3.2	Scope (Educational and Vocational), Careers and Opportunities. Self employment and entrepreneurship through home science.		CO4
	3.3	Relevance of Home Science Extension Activities for Community Development		CO4

Practical				
4	4.1	Preparation of a portfolio on developmental milestones of children (0-12 years).	**30**	CO5
	4.2	Observe children and map their growth and development and interpret the findings.		CO5
	4.3	Workshop on practical application of various projective techniques		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

iv) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

v) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

vi) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**

Programme						
Course Name	**Fashion Fundamentals**					
Type of Course	**MDC**					
Course Code	**MG2MDCHSC100**					
Course Level	**100-199**					
Course Summary	This course covers the basic concepts of fashion design, figure types, and the role of fashion professionals, providing students with a comprehensive understanding of the fashion design components. Students can explore the concepts of fibers, fabrics, dyes, and marketing principles.					
Semester	II	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		2	-	1	-	**30+30=60**
Pre-requisites, if any	Higher Secondary level knowledge					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Explain fashion terminologies and stages of fashion	U	1, 4, 5, 8
2	Describe the types of fibres, yarns, fabrics, dyes and printing styles	An	1, 6, 7, 10
3	Explain the design concepts	U	1, 3, 4, 10
4	Determine the dress designs suitable for different figure types	A	1, 2, 5, 9
5	Discover the role of fashion professionals	K	1, 3, 4, 6
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Fashion Dynamics, Textiles and Materials				
1	1.1	Fashion Terminologies- Fashion, Style, Fad, Classic, Trend, Haute Couture.	**14**	CO1
	1.2	Stages of Fashion Cycle- Introduction, Rise in popularity, Peak of popularity, Decline, Obsolescence.		CO1
	1.3	Fibres-Natural and Manmade Yarns-Simple and complex yarns Fabrics - Woven, knitted, Lace, Felts, Non-wovens Dyes - Natural and Artificial Printing styles- Direct and resist		CO2
Design Concepts and Figure types				
2	2.1	Introduction to Design, motif, pattern; Design - Structural and Decorative; Types of motifs -geometric, stylized, natural, abstract, types of pattern repeats - full drop, half drop, diamond, random, block, brick, ogee	**16**	CO3
	2.2	Elements of Art in dress design -line, form, colour, texture. Colour harmonies - Monochromatic, Analogous, Complementary Principles of design in dress - Balance, Rhythm, Emphasis, Proportion, Harmony		CO3
	2.3	Basic body shapes - Hour glass, Triangle, Inverted triangle, Slim rectangle, Wide rectangle. Common figure problems: large bust, small bust, broad shoulders, narrow shoulders, thick waist, hollow back (for skirts), large stomach		CO4
	2.4	Fashion marketing: Definition, 4 P's of marketing Role of fashion professionals - Designer, Merchandiser, Fashion Illustrator, Fashion stylist, Fashion Photographer, Pattern maker, Quality inspector		CO5
Practical				
3	3.1	Collection of Natural and Man-made Fibers	**30**	CO2
	3.2	Collection of woven, knitted, lace. non-woven Fabrics		CO2
	3.3	Structural and decorative designs Motives – geometric, natural and abstract		CO3
	3.4	Line – different types		CO3

	3.5	Colour – monochromatic, analogous and complementary		CO3
	3.6	Principles of design – balance, emphasis and rhythm		CO3
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture, Demonstration and practical Assignments	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**15**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**35**
	Practical Examination			**35**

End Semester Examination

Theory: 35 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x1=10)

ii) Short essay type questions: answer any 3 questions out of 5 (3x5=15)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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1. Kadolph, S. (2013). Textiles: Pearson New International Edition. United Kingdom: Pearson Education.
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3. Marshall, S. G. (2000). Individuality in Clothing Selection and Personal Appearance. United Kingdom: Prentice Hall.
4. Diamond (2007) Fashion Apparel, Accessories & Home Furnishings. (n.d.). India: Pearson Education.
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4. Barnett, A. (1997). Examining Textiles Technology. United Kingdom: Heinemann Educational.
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SEMESTER-III

MGU-UGP (HONOURS)

Syllabus

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Human Nutrition and Biochemistry**					
Type of Course	**DSC A**					
Course Code	**MG3DSCHSC200**					
Course Level	**200 - 299**					
Course Summary	The course 'Human Nutrition' aims at developing the basic understanding of food and nutrition and its effect on human health. This course encompasses the physiological and biochemical aspects of food and discusses the relationship between metabolites and human health. Moreover, the Course is focused on the advances in the most emerging area of Human nutrition and provides a detailed insight into understanding the composition, sources and deficiency of nutrients. The knowledge and skills acquired help the student to utilize food and nutrients as the powerful tools for physical, mental and social well-being.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		**45+ 30 = 75**
Pre-requisites, if any	Basic understanding of food and nutrition					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Recall the functions, sources and role of nutrients in the maintenance of good health	K	1
2	Explain the biological processes and systems as applicable to human nutrition.	U	1
3	Comprehend the significance of vitamins and minerals in maintenance of human health.	U	1
4	Summarize how dietary components, macronutrients (carbohydrates, proteins and fats) and micronutrients	U	2

	(vitamins and minerals), influence health and disease.		
5	Classify nutritional status based on BMI	An	10
6	Estimate qualitative and quantitative analysis of macro and micro nutrients	E	10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to Human Nutrition and Energy				
1	1.1	Dietary guidelines for Indians. My plate for the day. Concept of RDA/EAR. Factors affecting nutrient intake of various age groups, Indian reference man and woman.	**15**	CO 1
	1.2	Body Composition definition and important terms used. Methods of body composition assessment – BMI, Skinfold, BIA, WHR.		CO 1
	1.3	Units of energy, determining energy content of foods using Bomb Calorimeter, Gross Calorific Value and Physiological Fuel value of Foods.		CO 2
	1.4	Total energy expenditure measurement and components. Direct and Indirect calorimetry. Basal metabolism - definition, factors affecting. BMR, measurement, thermic effect of activity, thermic effect of food, adaptive thermogenesis, Energy requirement for different age groups.		CO 2
Carbohydrates, Proteins and Lipids				
2	2.1	Carbohydrates- Composition, classification, functions and food sources. Metabolic pathways of carbohydrates. Dietary and functional fiber and potential health benefits.	**15**	CO 3
	2.2	Proteins-Amino Acids – Essential and Non-Essential, Classification and functions of proteins, Metabolism (Deamination, Transamination and Decarboxylation, Urea cycle), Requirements and sources. Methods of evaluating protein quality of foods (BV, PER, NPU, DIAAS). Protein Energy Malnutrition.		CO 3

	2.3	Lipids-Fats and oils, Visible and invisible fats. Composition, functions, Types of fatty acids, Significance of Essential Fatty Acids classification, fat metabolism (Beta oxidation), ketone body formation, Food sources and requirements.		CO 3
Vitamins, Minerals and Water				
3	3.1	Vitamins- Functions, food sources, requirements, deficiency and toxicity of Fat soluble vitamins- A, D, E and K.	**15**	CO 4
	3.2	Functions, food sources, requirements and deficiency of Water soluble vitamins–Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, B12 and C.		CO 4
	3.3	Functions, food sources, requirements and deficiency/Toxicity of Minerals-Calcium, Phosphorous, Iron, Iodine.		CO 4
	3.4	Water- Distribution and functions in human body. Water balance from intake and output. Water imbalance (Dehydration) and Intoxication (oedema).		CO 4
Practical				
4	4.1	Height weight measurements and classification by BMI	**30**	CO5
	4.2	Food Analysis 1. Qualitative tests for a) Carbohydrates b) Protein c) Calcium d) Phosphorus e) Iron		CO6
	4.3	Quantitative tests for a) Lactose in milk b) Vitamin C in food stuffs c) Calcium in foods		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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1. Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012)Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
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2. Raghuramulu N., Madhavan Nair K and Kalyanasundaram S (2003), A manual of laboratory techniques, NIN, Hyderabad.

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Child Development**					
Type of Course	**DSC A**					
Course Code	**MG3DSCHSC201**					
Course Level	**200 -299**					
Course Summary	This course envisions to acquaint the learners with the changes evolving in an individual from birth to adolescence through an understanding of the milestones and detect delays and intervene for the same.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	**60**
Pre-requisites, if any	A basic knowledge of human development					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Examine the various aspects of prenatal development	A	1, 2, 10
2	Illustrate proficiency in the milestones of development during infancy and toddlerhood	An	2. 5, 10
3	Chart developmental delays in children	A	1, 7
4	Integrate play and education in programme planning for preschoolers	An	3, 10
5	Appraise the changes in various domains of development during adolescence	An	1, 10
6	Develop skills in early intervention strategies, developing creative teaching methods, growth monitoring, and milestone mapping.	S	3, 6, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Prenatal development to Infancy				
1	1.1	Genes and Chromosomes, genetic inheritance, chromosomal abnormalities.	**16**	CO1
	1.2	Conception, stages of prenatal development, prenatal influences, stages of labour, types of birth, complications of pregnancy and child birth. Prenatal stimulation.		CO1
	1.3	Prenatal diagnostic techniques. Artificial insemination – IVF and GIFT, fraternal and identical twins.		CO1
	1.4	Neonate – Definition, characteristics, reflexes, abilities and adjustments, APGAR.		CO2
	1.5	Infancy – Developmental milestones in all domains, Immediate care of the newborn, types of feeding – natural and artificial, Immunization, infant stimulation		CO2
	1.6	At risk babies, SIDS, LBW babies, Baby friendly hospitals		CO2
	1.7	Visit hospitals, observe and report neonatal characteristics and reflexes.		CO2
Developmental delays and Intervention				
2	2.1	Developmental delay – meaning, definition, need and importance of early identification, techniques used for assessment	**12**	CO3
	2.2	Early stimulation and early intervention – meaning, need and importance. Therapeutics of early intervention		CO3
	2.3	Visit early intervention units and get acquainted with the modes of intervention and assessment of children with developmental delays		CO3

Early and Late Childhood Years				
3	3.1	Early and late Childhood – Definition, milestones and domains of development, habit formation, discipline, importance and values of play, misdemeanours during late childhood	**20**	CO4
	3.2	Early Childhood Education – Definition, significance and scope, objectives. Emergent literacy and school readiness, concept formation, programme planning, teaching learning materials for ECE		CO4
	3.4	Compile activities that can be used to teach concepts to children.		CO4
	3.5	Prepare an album displaying theme based creative activities.		CO4
	3.6	Plot the anthropometric measurements and map the milestones of children using growth monitoring charts and interpret the findings.		CO4
Adolescence				
4	4.1	Physiological changes, needs and challenges – transition from childhood to adulthood – Puberty and its consequences, Gender differences, Sexuality, sexual needs and sex education, body image and its impact.	**12**	CO5
	4.2	Psychological changes – identity formation, emotions and behaviour problems, sociological changes – peer and family relationships		CO5
5	Teacher Specific Content (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B. End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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1. Berk, L.E., (2007), Development through the Life Span, Pearson Education, New Delhi.
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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Mental Well-Being of Adolescents**					
Type of Course	**DSC B**					
Course Code	**MG3DSCHSC202**					
Course Level	**200-299**					
Course Summary	This course aims to provide a thorough understanding of the physical, social, emotional, and cognitive aspects of adolescence. It encompasses various domains and challenges faced by adolescents, emphasizing coping mechanisms and life skills for holistic development.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30 = 75**
Pre-requisites, if any	A foundational understanding of stages in human life, anatomy, health education, and basic life skills.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Comprehend the developments in various domains during adolescence	U	2, 6,10
2	Summarise the physical and sociological problems of adolescents	U	6, 10
3	Recognise the psychosocial issues and concerns of adolescents	K	1, 7
4	Cite various coping mechanisms to attain mental well being	U	3, 6,10
5	Interpret the skills needed for life enhancement	U	4, 5, 10
6	Develop skill in providing life skills training, analyzing adolescent issues, practice coping mechanisms through role plays, creating digital tools for adolescent concerns, and	S	6, 10

	promoting a well-rounded understanding of adolescent development and developing effective intervention strategies.		
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Adolescent health and development				
1	1.1	Definition, Characteristics, Developmental tasks, stages	**4**	CO1
	1.2	Domains of development – physical, social, emotional, cognitive.		CO1
	1.3	Emotional Intelligence		CO1
Problems during adolescence				
2	2.1	Physical problems - Body image, height, weight, skin, colour, acne, obesity, underweight, reproductive and sexual health issues, STDs	**22**	CO2
	2.2	Sociological problems – Teenage pregnancy, juvenile delinquency		CO2
	2.3	Educational and vocational problems		CO2
	2.4	Eating disorders, mental health issues (Anxiety, depression, suicidal tendencies), stress, adjustment and behaviour problems, risk behaviours		CO3
	2.5	Social issues – Academic pressure, peer pressure, bullying, identity crisis, substance abuse, addiction, relationship issues, sexual abuse, delinquency, anti-social behaviour, adolescent labour, teen marriage, adolescent trafficking, media addiction		CO3
	2.6	Emotional problems – Anger, aggression, fear, phobia		CO3

Coping mechanisms and life skill education for adolescents				
3	3.1	Coping with stress – yoga, exercise, meditation, music therapy, art therapy, dance, bibliotherapy, horticultural therapy, drama therapy, hobbies, defence mechanisms	**19**	CO4
	3.2	Academic counselling, vocational/career counselling, socio-personal counselling, career talks		CO4
	3.3	Life skills for self understanding and self management – self esteem, self awareness, assertiveness		CO5
	3.4	Life skills for knowing and living with others – effective communication, interrelationships, empathy, conflict resolution		CO5
	3.5	Life skills for dealing with issues and problems – critical thinking, creative thinking, decision making and problem solving		CO5
	3.6	College study skills – time management, note taking, learning styles and effective studying, test taking skills, memory enhancing techniques		CO5
Practical				
4	4.1	Workshop on basic life skill training.	**30**	CO6
	4.2	Visit to a counselling centres.		CO6
	4.3	Write a review article on any issue pertaining to adolescents		CO6
	4.4	Conduct role plays on various coping mechanisms.		CO6
	4.5	Develop a digital tool on adolescent concerns		CO6
	4.6	Prepare a case profile of adolescents between 13-18 years of age.		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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1. Santrock, J.W. (2011). *Adolescence* (7th ed.). New Delhi: McGraw Hill Education India Pvt. Ltd.
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Programme	**BSc (Hons) Home Science**					
Course Name	**Fashion Concepts (Specialization-Textiles and Apparel designing)**					
Type of Course	**DSE**					
Course Code	**MG3DSEHSC200**					
Course Level	**200-299**					
Course Summary	This comprehensive course delves into the multifaceted realm of fashion, covering a spectrum of topics from understanding the functions of clothing and factors influencing fashion trends to mastering advanced elements of dress design, wardrobe planning, fashion business intricacies, and illustration proficiency. Students will develop practical skills and theoretical insights essential for navigating the dynamic and evolving world of fashion.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Students entering this course should have a foundational understanding of basic art and design principles. Familiarity with introductory fashion concepts and terminology is recommended					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Examine the functions of clothing, and theories guiding fashion movement.	U	1, 2, 8, 9
2	Develop a comprehensive understanding of advanced application of elements of art in dress design.	A	5, 9, 10
3	Understand the intricacies of fashion business and merchandising	U	1, 6, 7, 9
4	Understand the processes involved in boutique management	U	3, 4, 5, 8

5	Acquire proficiency in illustration fundamentals and applying elements and principles of design to enhance dress design.	A	2, 3, 6,10
6	Illustrate human figures and develop fashion garments	A	1, 6, 7, 10
Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to fashion and design				
1	1.1	Functions of Clothing- Protection and Comfort, Identity, Status and Prestige, Ornamental and Aesthetic , Sociability and Conformity , Self-Expression and Actualisation Function. Maslow's Hierarchy of Human Needs, Theories of fashion- Downward flow theory, Horizontal flow theory, Upward flow theory. Principles of fashion movement	**15**	CO1
	1.2	Advanced Elements of Dress Design- Elements - Dot, line, Shape, Form, Space, Texture		CO2
Fashion Business				
2	2.1	Fashion seasons - Spring/Summer, Fall/Winter, Resort and pre-Fall Fashion forecasting -Long term and short term	**20**	CO3
	2.2	Fashion Consumers - Fashion Leaders/ Influencers, Fashion Followers, Laggards, Fashion Victims		CO3
	2.3	Merchandising- Introduction, Definition, Responsibilities of a merchandiser. Types of merchandising: Retail merchandising, Visual merchandising, Garment export merchandising.		CO3
	2.4	Sustainable fashion: Definition, Sustainable fashion brands		CO3
Boutique Management				
3	3.1	Types of Boutique, Factors to be considered before starting up a Boutique, Inventory management, fashion marketing	**10**	CO4
	3.2	Sales promotion- Social media, advertising. Customer relations, Branding.		CO4
Practical				
4	4.1	Handling different types of media, Practicing dot, line, shape. Practicing shading techniques Rendering techniques - Texturing of fabrics, objects	**30**	CO5

		Application of elements and principles of design in dress design		
	4.2	Understanding human anatomy and practicing 8 head, 10 head figure Creating any two styles of casual wear, formal wear, party wear		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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1. Barnard, M. (2013). Fashion as Communication. United Kingdom: Taylor & Francis.
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5. Caroline Tatham and Julian Seaman, Fashion design drawing course, James & Hudson Publication (2003)
6. Susheela Dantyagi, "Fundamental of Textiles and Their Care", Orient Longman Limited, New Delhi, 5th Edition, 2006.\
7. Brianna Stewart (2014), How to Open a Boutique: The Simple Guide to Boutique Success, Create Independent Publishing Platform, Newyork.

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1. Bina Abling, Fashion sketch book, fair child publications, New York (1987)
2. Julian seaman, fashion illustration basic techniques, B.T. Batsfort Ltd,. London (1996)
3. Sumathi, G. J. (2007). Elements of Fashion and Apparel Design. India: New Age International.
4. Introduction to Fashion Technology. (2007). India: Laxmi Publications Pvt Limited.

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Landscaping and Gardening**					
Type of Course	**DSE**					
Course Code	**MG3DSEHSC201**					
Course Level	**200-299**					
Course Summary	The Course develops among the students the core principles, types and components of landscape gardens. It provides experiential learning by upgrading their skills in designing various residential and commercial landscape plans. It can further motivate them to develop and maintain indoor gardens and kitchen gardens for sustainability aspects.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	**-**	**1**		**45+30=75**
Pre-requisites, if any	Aptitude towards gardening and appreciation of greenery. Basic Interest in plant cultivation and maintenance.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
After the successful completion of the course the student should be able to:			
1	Design with the elements and principles and components of landscape gardening	S	3
2	Acquire skills in cultivation and propagation of different garden plants and demonstrate Terrarium/ Dish garden/ Bottle garden	C	6, 7, 10
3	Gain insight into layouts and types of garden	E	3
4	Familiarize and keep abreast with modern trends in gardening	Ap	10
5	Attain the know how in the care and maintenance of garden	S	1, 2
6	Create value added plant and floral products and acquire entrepreneurial skills in gardening	S	4, 5
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Basics of Landscaping and Garden				
1	1.1	Meaning and importance of landscaping, Elements and Principles of landscape gardening	**15**	1
	1.2	Components of landscape design, Garden Styles layout of formal, informal and small, medium, large gardens. English, Italian, French, Persian, Mughal and Japanese garden.		1
	1.3	Non Living Garden components: Structural features - pavements, borders, hedges / edges, topiary, pergola, gazebo and garden adornments etc.		1,3
Garden components- Living / Natural				
2	2.1	Classification, Types and Application in Gardens.	**15**	1,3
	2.2	Trees & Ornamental plants- Arboriculture, Importance and value of trees, Application.		1,3
	2.3	Ornamental plants: Herbs – annuals and biennials, ground covers; Lawns, Shrubs – climbers, creepers, perennials – bulbs, tubers, ferns, succulents, cacti, ornamental grass, bamboo and palms.		1,3
	2.4	Trends in gardening- Indoor gardening – Bonsai; Terrarium/ Bottle garden/ Dish garden, Rooftop gardening, Vertical garden, Kitchen gardening, Water garden, Rockery etc.		4
Propagation, Care and Maintenance of Plants				
3	3.1	Types of Propagation - Seed propagation, vegetative propagation/ asexual propagation – layering, cutting, grafting, budding, Micro propagation/ tissue culturing.	**15**	2,5
	3.2	Garden tools and implements, Routine duties in a garden; Watering, Potting and repotting techniques, Pruning, disbudding, defoliation, staking and mulching.		2,5
	3.3	Soil preparation, Organic manures and fertilizers, Natural pesticides; irrigation methods.		2,5
Practical -Applied Gardening				
4	4.1	Propagation methods – layering, cutting, grafting, budding.	**30**	2,5,6
	4.2	Training in Bonsai, Terrarium/ bottle garden/ dish garden, Aquaponics/ Hydroponics.		6
	4.3	Kitchen gardening - Design, types of vegetables grown.		3,5,6
	4.4	Preparation of Value added products from plant materials		6

5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.
	Practical session, Class room teaching, Field visits, Exhibition etc.

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)
ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)
iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)
ii) Record (10 marks)

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5. Laurie M., 1986. An Introduction to Landscape Architecture, Elsevier. ISBN-9780444009708
6. Calkins and Carroll C. (Ed.) 1987. Reader's Digest Illustrated Guide to Gardening, The Reader's Digest Association, New York. ISBN 13: 9781464300288.
7. Rohan Bhansali, 2022. A Complete Guide To Home Gardening, https://organicabiotech.com/category/gardening/

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2. Swarup, V. 1997, Ornamental Horticulture, Macmillan India Ltd., Chennai
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	Mahatma Gandhi University **Kottayam**

Programme	**Home Science**					
Course Name	**Sports Nutrition (Specialization-Food Nutrition and Dietetics)**					
Type of Course	**DSE**					
Course Code	**MG3DSEHSC202**					
Course Level	**200 – 299**					
Course Summary	The course enables students to have a comprehensive understanding of nutrition as it pertains to athletic performance, recovery, and overall health. Students will learn about the essential nutrients, dietary strategies, and nutritional requirements specific to various types of physical activity, Practical application will enable students to develop individualized nutrition plans for athletes.					
Semester	**III**	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	75
Pre-requisites, if any	A strong understanding of fundamental principles of nutrition including macronutrients, micronutrients and metabolism, exercise science, biology and chemistry.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Understanding the different types of physical activities basic principles of sports nutrition.	K	1,3,7,10
2	Identify the action and effect of various nutrients in fitness	A	1,2,6,10
3	Critically evaluate the importance of exercise performances and the effects of metabolism of various nutrients.	U	1,2,4,10
4	Categorize the different types of nutritional supplements and its functions for fitness.	An	1,2,7,10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
1	1.1 1.2 1.3	**Introduction to Sports nutrition** Definition of physical activity, exercise, physical fitness. Sports physiology. Benefits of physical activity and exercise. Classification of sports activities. Nutritional requirements in sports events- team power, endurance events. Pre event and post event meal	15	CO 1
2	2.1 2.2 2.3	**Role of nutrition in sports** Effect of macronutrients during exercise- carbohydrate, protein, fat. Effect of micronutrients during exercise: Iron, Calcium and vitamins. Role of Water and Electrolytes – Requirements, Fluid Balance and Thermoregulation in Exercise. Effect of Dehydration in Exercise Performance.	20	CO 2
3	3.1 3.2 3.3	**Exercise performance and nutrition** Energy expenditure during physical activity Carbohydrate intake and performance Fat intake and performance Protein intake and performance Fluid and electrolyte loss and replacement in exercise Antioxidant requirements for exercise.	20	CO 3
4	4.1	**Dietary supplements & Ergogenic Aids** Dietary supplement: Definition and classifications; Ergogenic aids: Definitions and Classifications;	20	CO 4

	4.2 4.3	Regulations on Dietary supplements: FSSAI and NADA Anti doping agency - list of banned drugs/substances. Merits and demerits of ergogenic aids and supplements		
5	Teacher Specific content Written Examination Practical session, Class room Teaching, Awareness sessions, Lab visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

Semester End Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 4 questions out of 6 (5x4=20)

iii) Essay type questions: Answer any 1 question out of 2(1x10=10)

Practical: 35 Marks

i. Laboratory Evaluation (25 Marks)

ii. Record (10 Marks**)**

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1. Antia. F.P. and Philip Abraham, Clinical dietetics and Nutrition, fourth edition, Oxford University Press.2002.
2. Don Benordot, Advanced sports nutrition, second edition, Human Kinetics,2012
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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Early Childhood Education (Specialization-Human Development)**					
Type of Course	**DSE**					
Course Code	**MG3DSEHSC203**					
Course Level	**200 -299**					
Course Summary	This course not only imparts theoretical knowledge but also hones the practical skills necessary for success in the dynamic field of early childhood education. Learners will leave with a comprehensive skill set, ready to contribute to the positive development and education of young minds in a preschool setting.					
Semester	III	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	**-**	**1**		**45+30=75**
Pre-requisites, if any	Basic knowledge of child development, communication skills, technology literacy, a passion for early childhood education, and a commitment to continuous learning and collaboration.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe the meaning and significance of early childhood education and planning, organizing and implementing programmes in a pre-school.	U	1,3,7,10
2	Assess the significance of play materials and toys in child development.	An	1, 2, 4,10
3	Analyse the administrational skills and management strategies in Early Childhood Education.	An	1, 2, 4,10

4	Demonstrate skills in designing and implementing innovative and inclusive early childhood education curricula, theme-based weekly programs, learning materials for effective teaching.	S	1, 2, 4,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Introduction to Early Childhood Care and Education				
1	1.1	Significance, Aims and Objectives of early childhood care and education.	**20**	CO1
	1.2	Types of preschools, Methods of Early Childhood Education: Montessori, kindergarten, Curriculum approaches. (Project approach, Reggio Emilia approach, Head Start Program)		CO1
	1.3	Program Planning: Definition, Objectives, Importance, Key concepts, Process, Principles of programme planning. Planning for learning experiences – long term, short term, weekly, daily plan. Factors affecting curriculum planning		CO1
Importance of play and play materials				
2	2.1	Play: Definition, concept, significance, types, characteristics and Values. Teacher's role in creating environment and promoting play. Use of play way approach in the curriculum for young children. Montessori materials and curriculum Characteristics of good play equipment and materials, Care and uses of play equipment, Indigenous play material	**15**	CO2
	2.2	Toys: Definition, concepts, importance of toys in child development, types of children's toys, history of toy making.		CO2

		Toy Making: concept, importance, procedure, child ergonomics, Safety issues, developmental appropriateness.		
Administration and Management of Early Childhood Centre				
3	3.1	Meaning, roles, responsibilities and skills of administrator. Administrative setup, infrastructure, records and registers- need, significance, types and maintenance, job profiles of personnels, Role and functions of organisations.	**15**	CO3
	3.2	Designing early childhood facilities: Physical set up and building, choosing the site; General design principles, setting up early childhood classroom, Planning space allotment – designing and maintaining outdoor and indoor space, storage, need for play spaces		CO3
	3.3	Strategies to foster creativity in classroom- Visual, Auditory, tactile, Kinesthetic- (VATK) kits, music and movement, storytelling, puppets, field trips		CO4
	3.4	Teaching-learning materials in Early Childhood Education		CO4
Practical / Related Experience-Exploring Early Childhood Education: Curriculum, Creativity, and Resources				
4	4.1	Visit to various ECE centers. Develop a checklist to compare and contrast on the type of curriculum followed and write a report.	**25**	CO1
	4.2	Theme based weekly progarmme - plan a curriculum and execute for preschool school children.		CO2
	4.3	Developing learning materials for early childhood education.		CO2
	4.4	Developing prototype designs for toys		CO4
	4.5	Market survey – early childhood education resource materials		CO4
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i. Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii. Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii. Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i. Laboratory Evaluation (25 marks)
ii. Record (10 marks)

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1. Bredekamp, S., and Copple. C. (eds.) (1997). Developmentally Appropriate Practice in Early Childhood Programs. Washingto, D.C.: National Association for the Education of Young Children (NAEYC).
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	Mahatma Gandhi University **Kottayam**					
Programme						
Course Name	**Surface Embellishment Techniques**					
Type of Course	**MDC**					
Course Code	**MG3MDCHSC200**					
Course Level	**200-299**					
Course Summary	This course in surface embellishments encompasses fundamental hand embroidery techniques, stitches, and specialized methods. Students learn flat, looped, and knotted stitches and counted thread techniques, and delve into various traditional Indian embroidery styles.					
Semester	III	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	**45**
Pre-requisites, if any	Students should possess fundamental sewing skills, knowledge of basic stitches.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Comprehend tools and techniques for surface embellishments.	U	1, 9, 10
2	Demonstrate proficiency in executing various hand embroidery stitches.	A	1, 3, 10
3	Create samples showcasing diverse embroidery techniques with proficiency.	A	1, 2, 3
Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Embroidery essentials				
1	1.1	Introduction to surface embellishments. Tools used for embroidery. Selection of needles, threads and fabric	10	CO1
	1.2	Tracing methods: carbon paper, tissue paper, tracing paper		CO1
Basic hand embroidery stitches				
2	2.1	Flat Stitches: Running, stem, satin, back, shade work, hemming bone.	15	CO2
	2.2	Looped Stitches: Chain, lazy-daisy, fly, feather blanket, button hole.		CO2
	2.3	Knotted Stitches: French knot, coral knot, bullion, pistil stitch (Palestrina stitch)		CO2
	2.4	Prepare samples applying basic hand embroidery stitches		CO2
Practical on selected Traditional Techniques				
3	3.1	Counted thread embroidery: Assisi work, Counted cross stitch, Black work, drawn thread work.	20	CO3
	3.2	Indian traditional embroidery: Kantha of Bengal, kasuti of Karnataka, chikankari of Luckhnow		CO3
	3.3	Prepare samples for counted thread embroidery and traditional embroidery		CO3
	3.4	Other techniques: Applique work, Ribbon work, Mirror work		CO4
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B. End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

REFERENCES

1. Cerier A.B. (2005) Start to Sew, Creative Publishing international Creative Publishing International, Chanhassen, Minnesota
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	Mahatma Gandhi University **Kottayam**
Programme	
Course Name	**Basics of Counselling**
Type of Course	**VAC**
Course Code	**MG3VACHSC200**
Course Level	**200-299**
Course Summary	The course acquaints the learner with the basic theoretical perspectives of counselling and guidance and also its application,

Semester	III	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	**45**
Pre-requisites, if any	A foundational knowledge in psychology and interpersonal communication. Familiarity with basic counselling concepts as well as an awareness of the cultural and social context.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Classify the various components and types of guidance and counselling	U	1, 2
2	Describe the observational instruments utilized in the field of counselling.	U	1, 10
3	Analyse the array of techniques and tools employed in counselling and guidance practices.	An	1,2
4	Employ counselling therapies effectively in real-life scenarios.	A	4, 6
5	Develop skill required for effective guidance and counselling.	S	4, 10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Concept of guidance and counselling				
1	1.1	Basic assumption and principles of counselling, Importance of understanding the individual, barriers to understanding. Types of counselling- Educational, Vocational and Personal. Difference between guidance and counselling.	**15**	CO1
	1.2	Counsellor skills, Probing skill- through questioning and organising facts		CO1
	1.3	Visit to a counselling centre and reporting on its functioning		CO1
Observational Instruments				
2	2.1	Rating scale, checklist and anecdotal records	**15**	CO2
	2.2	Self-reporting techniques: Self-expression, essays, self-description, self-awareness exercises, diaries and daily schedule.		CO2
	2.3	Case study, Interview – types and formulation		CO2
	2.4	Psychological tests, Personality assessment, career related assessment		CO3
	2.5	Preparation of case study and its analysis		CO5
Therapies used in Counselling				
3	**3.1**	Behaviour modification techniques –systematic desensitization, flooding, relaxation training (Yoga and meditation) Social skills training, exposure therapy, aversion therapy, modelling	**15**	C04
	3.2	Cognitive behaviour therapy, humanistic/client centered therapy, family and group psychology, transaction analysis, play therapy		C04
	3.3	Observe application of various therapies and write a report		CO5
4		Teacher Specific Content (This will be evaluated internally) Practical session, Class room Teaching, Field visits etc.		

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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SEMESTER-IV

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Interior Decoration**					
Type of Course	**DSC A**					
Course Code	**MG4DSCHSC200**					
Course Level	**200-299**					
Course Summary	The Course is a launch pad for the students to understand the rudiments of functional as well as aesthetic aspects of interior spaces and how to make them more liveable and comfortable for occupants. The course facilitates experiential learning on designing spaces.					
Semester	IV	**Credits**			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		**45+30=75**
Pre-requisites, if any	The student who has taken Home Science as a Major component at the foundation level.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
After the successful completion of the course the student should be able to:			
1	Judiciously select lighting type and light fixtures for interiors.	An	1,2
2	Evaluate Colour schemes for interiors.	E	1,2
3	Select and arrange furniture, furnishings and accessories in interiors to improve functionality and aesthetics of contemporary interiors.	A	2,8
4	Design furniture, furnishings and accessories appropriate for different interior spaces.	C	6,7
5	Propose window, wall and floor treatments for trendy interiors	S	2,10
6	Compose sustainable accessories, floral decor and indoor garden for different theme based settings.	C	7, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Colour and Lighting in Interior Decor				
1	1.1	Colour as a design element, Colour -Theory, Harmonies	**15**	2
	1.2	Use of colour in interiors, Colour psychology		2
	1.3	Light as a major design element, Importance and sources, Lighting requirements in interiors		1
	1.4	Types of lighting- Selection of lighting arrangements Type of lamps and luminaires.		1
Furniture and Furnishings				
2	2.1	Styles and types of furniture, Furniture requirements in homes, Selection and care of furniture, Guidelines for arranging furniture.	**15**	3,4
	2.2	Construction- understanding joinery, materials and finishes used for furniture making, Modular furniture.		3
	2.3	Classification of Furnishings, Factors in selection of furnishings for home		3, 4
	2.4	Window treatments-hard and soft treatments. Curtains and Draperies, Floor and Wall coverings- Rugs, Carpets, Tapestries- Types, selection, use and care.		5
Interior Enrichment with Accessories				
3	3.1	Accessories – Uses, Classification, Selection & Arrangement. Sustainability concerns in accessorizing homes.	**15**	4
	3.2	Artifacts and Antiques, Crafts of India used as interior decor.		4
	3.3	Floral Decorations- types and applications, Flower arrangements- Principles, Styles and Basic Shapes, Dry and Artificial floral settings, Indoorscaping and Indoor plants.		6
	3.4	Contemporary trends in Interior design -in relation with Lighting, furniture, furnishings and accessories		3
Practical in Interior Decoration				
	4.1	Preparation of portfolio based on market survey on lighting	**30**	1

4	4.2	Preparation of portfolio on colour schemes and application in interiors		2
	4.3	Report on market review of furniture and furnishings		3,4
	4.4	Illustrations/ model making of different curtain styles		4,5
	4.5	Demonstration of basic shapes in flower arrangements with Fresh/ Dry / Artificial flowers and plant materials, Bouquet making.		6
	4.6	Flower and Plant drying techniques for home and commercial purposes.		6
	4.7	Creation of art objects, Wealth from Waste- any decorative/ functional accessories with discarded materials.		3,4
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Dynamics of Extension and Communication**					
Type of Course	**DSC A**					
Course Code	**MG4DSCHSC201**					
Course Level	**200-299**					
Course Summary	This course covers the fundamentals of extension education in India, encompassing topics such as the meaning and objectives of extension, extension teaching methods, community development, leadership, and communication in extension.					
Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-		-	**60**
Pre-requisites, if any	Basic knowledge in Extension.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Develop an understanding about the meaning, functions and characteristics of Extension Education	U	1,6
2	Describe the different community and its developmental set up in India	U	1,6,7
3	Understand the importance of rural Leadership in bringing about planned change in human behaviour for developing community	U	1,6
4	Formulate communication methods to approach people effectively.	K	1,2,5,10

5	Plan an extension program by evaluating its effectiveness.	C	5,6,8
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Concepts of extension				
1	1.1	Meaning and objectives of extension in India	**15**	CO1
	1.2	Concepts, need, functions of extension.		CO1
	1.3	Steps in extension teaching		CO1
	1.4	Extension system and Concept of extension educational process		CO1
	1.5	Role of Extension worker. Qualities of an extension worker.		CO1
	Practical/ Related experience	**Extension Education** Interact with extension workers and understand their nature of work and their commitment towards the society.		CO1
Community Development				
2	2.1	Basics of community development. Objectives and principles of community development.	**15**	CO2
	2.2	Types of communities in India, and its special features- rural, urban and tribal.		CO2
	2.3	Community development programmes for women and children in rural areas.-SGSY, ICDS and Indira Mahila Yojana, STEP		CO2
	Practical/ Related experience	**Community Development** Visit any one community organization (Panchayat/Cooperatives /School / Krishy Vigyan Kendra) to find out its role in community development and record the services rendered. • Observe the working of any one community development programme in your community and record its features.		CO3
Programme Planning in Extension				

3	3.1	Objectives, principles, and steps involved in extension programme planning.	**15**	CO3
	3.2	Leadership -Concept and definitions, types of community leaders-Professional leader and lay leaders autocratic, democratic and lassiez-faire leaders Methods of identifying community leaders. Importance of rural leadership for leadership for community development.		CO4
Communication and methods of approaching people				
4	4.1	Definition, importance and elements and problems in communication.	**15**	CO4
	4.2	Classification of extension teaching methods individual (personal visits, letters) group (meetings, discussions, demonstrations, folksongs, drama, role play, seminar, field trip, exhibitions) and mass(print-newspaper , magazine , books) and electronic media.		CO 4
	4.3	**Audio-visual aids** Definition, importance, classification (audio,visual and audio -visual), cone of experience.Factors to be considered in selection, preparation and use of audio-visual aids.		CO4
	Practical/ Related experience	**Community Development Programme Planning** Prepare a plan of work for any one community development programme related to home science.		CO 4
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Food Science and Food Safety**
Type of Course	**DSC B**
Course Code	**MG4DSCHSC202**
Course Level	**200 – 299**
Course Summary	A course in Food Science and Food Safety will provide students with a comprehensive understanding the science of food production and the measures taken to ensure the safety and quality of the food supply. This course will prepare students for careers in food production, quality assurance and research in the food industry.

Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30= 75**
Pre-requisites, if any	All arts and science students except BSc Family and Community students are eligible for the course.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Summarize the fundamentals of Food Science.	U	1,2
2	Identify the structure, composition and nutritional quality of Foods in group I& II.	A	2,3,7
3	Explain the structure, composition and nutritional quality of Foods in Group III &IV	U	2,3,7
4	Apply the food preservation techniques.	A	1,2,7
5	Discuss the principles of quality assurance and safe food handling methods.	U	1,2,3,6
6	Evaluate the changes of food in various cooking conditions.	E	1,2,7
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course Description	Hours	CO No.
Introduction to Food Science and Food Groups				
1	1.1	Definition, Classification of foods and Terms used in Food Science. Health, Food, Nutrition, Nutrients: Macronutrients (Carbohydrates, Proteins and lipids) and Micronutrients (Vitamins and Minerals).	**15**	CO 1
	1.2	Food groups: Functions of foods, food groups (Basic food group system – (ICMR), My Healthy Plate, Balanced diet.		CO 1
	1.3	Functions of foods – Physiological, Psychological and Social Functions.		CO 1
	1.4	Study of Food Groups I - Classification, Nutritive Composition and Health benefits.		CO 2
	1.5	Study of Food Groups II- Fruits, Vegetables, Classification, Nutritive Composition and Health benefits.		CO 2
	1.6	Study of Food Groups III- Milk and Milk Products, Eggs, Meat, Fish Classification and Nutritive Composition.		CO 3
	1.7	Study of Food Groups IV- Nuts, oil seeds, Spices and condiments Classification and Nutritive Composition.		CO 3
Fundamentals of Food Preservation				
2	2.1	Food Preservation - Definition, Importance of Food Preservation, Basic Principles of Food Preservation	**15**	CO 4
	2.2	Food preservation methods. Preservation by use of High Temperature. Preservation by Low Temperature, Preservation by Osmosis		CO 4
Quality Assurance and Food Safety				
3	3.1	Quality assurance- Current concepts of quality control, Quality control parameters.	**15**	CO 5

	3.2	Food Safety – Food handling and the sources of contamination, safe food practices (buying food, storing food, preparing food, cooking food, serving food), Practical rules for food sanitation, Food Safety and Standards Authority of India (FSSAI), Hazard Analysis Critical Control Point (HACCP).		CO 5
Practical				
4	4.1	Classify foods on the basis of nutrients -Protein, Iron, Calcium, Vitamin A, Vitamin C	**30**	CO 6
	4.2	Stages of sugar cookery		CO 6
	4.3	Stages of egg white foam formation		CO 6
	4.4	Effect of cooking on vegetable pigments		CO 6
	4.5	Enzymatic browning, Methods to prevent browning in fruits		CO 6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Food Science and Quality Control**					
Type of Course	**DSE**					
Course Code	**MG4DSEHSC200**					
Course Level	**200 – 299**					
Course Summary	To impart knowledge of structure, composition, products, nutritional contribution, selection and changes during cooking of the various food groups, new trends in food technology and to gain knowledge about foods through experiments, with the goal of ensuring the availability of safe and nutritious food.					
Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Basic understanding of food groups					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Identify the nutritive value of plant based foods.	U	1,2, 4
2	Analyze the composition, nutritive value and applications of animal foods	An	1,2, 4
3	Explain the new emerging trends in food science and its various applications in food processing sector.	U	1,2, 4,9
4	Analyze the various sources and factors responsible for food safety, quality concepts and safe practices in food companies.	An	1,2,4,9
5	Identify the different laws and standards pertaining to foods	U	2,6,8
6	Analyze the effect of cooking on various food, availability and cost of food items in the market and the common adulterants used in various food items.	An	1,2,8,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Study of Plant and Animal Foods				
1	1.1	**(**Basic Concepts, Classification, Nutritive value**)** Cereals and Millets– Basic Structure, Cereal Products, Processing -parboiling - merits and demerits. Cereal cookery- cereal protein - gluten formation, cereal starch - structure, effect of cooking – dry and moist heat. Common millets in India and its health benefits.	**20**	CO1
	1.2	Pulses and Legumes - germination and fermentation, advantages, ant nutritional factors (trypsin inhibitors, lathyrogens), Micro greens and its health benefits.		CO1
	1.3	Vegetables - loss of nutrients during cooking, conservation of nutrients, Pigments, effect of acid and alkali in pigments.		CO1
	1.4	Fruits- antioxidant value, pigments, flavour components, changes in fruits during ripening Enzymatic Browning.		CO1
	1.5	Nuts and Oil seeds - rancidity in oils - types, factors leading to rancidity, prevention, hydrogenation of fats.		CO1
	1.6	Sugars and related products - Stages of sugar cookery and its applications, artificial sweeteners. Spices and condiments - Major spices and condiments of India, Health benefits		CO1
	1.7	Milk and Milk Products: Types of milk, Fortified milk, composition and nutritive value, pasteurization and homogenization – advantages		CO2
	1.8	Eggs- Structure, composition and nutritive value, evaluation of egg quality, deterioration in egg quality, egg white foam -stages, factors affecting foam formation, culinary role of eggs, designer eggs.		CO2
	1.9	Meat, poultry and fish – classification, composition and nutritive value, Structure of meat, Rigor mortis, Selection of fish, Fish spoilage		CO2
Emerging Trends in Food Science				
2	2.1	Food biotechnology: Genetically modified foods, Applications of biotechnology in food processing	**10**	CO3
	2.2	Functional foods and Nutraceuticals: Prebiotics, probiotics, symbiotic, phytochemicals Antioxidants, Nutraceuticals, Nutrigenomics.		CO3

	2.3	Alternative Proteins: Plant based proteins, Alga based proteins, Cultivated Meat, Fermentation based proteins		CO3
	2.4	Artificial intelligence in food science and internet of Things (IoT) applications in the food industry		CO3
Food Safety - Hazard Analysis, Risk Assessment, Food Laws and Regulations				
3	3.1	Food contamination: definition Sources of contamination, Difference between food poisoning and food infection, Factors affecting food safety and food spoilage.	**15**	CO4
	3.2	Food adulteration - definition, types of adulteration in various foods- intentional, incidental and metallic contaminants		CO4
	3.3	Physical hazards (metals, glass, etc), Chemical hazards (food additive toxicology, natural toxins, pesticides, antibiotics, hormones, heavy metals and packaging components), Biological hazards (epidemiology of biological pathogens: virus, bacteria and fungi, parasites),		CO4
	3.4	Food Safety Management System (FSMS) Good Practices/ PRPs - GMP, GHP Management Element / System Statutory and regulatory requirements, Hazard Analysis Critical Control Point (HACCP): principles of HAACP, applications of HACCP Food Safety and Standards Bill 2005, FSSAI.		CO5
	3.5	International Laws and Agreements - FAO, WHO, Codex Alimentarious, WTO, JEFA, APEDA, ISO 22000 series.,		CO5
Practical				
4	4.1	Market survey of locally available food items like cereals, pulses, fruits and vegetables, milk and milk products, fats and oils, nuts and oilseeds, sugar and jaggery, meat, fish, and poultry and miscellaneous food items like biscuits, jams, jellies, ketchup etc. types and their cost.	**30**	CO6
	4.2	Stages of sugar cookery.		CO6
	4.3	Components of an egg by weight, Stages of egg white foam formation.		CO6
	4.4	Effect of cooking on vegetable pigments.		CO6
	4.5	Methods to prevent enzymatic browning in fruits Non enzymatic browning.		CO6
	4.6	Detection of adulteration in various foods-Milk, fat and oil, Sugar, Honey, Chilly powder, Turmeric.		CO6

5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.		

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Srilakshmi B. (2018), Food Science,.7th Edition, New Age International (P) Ltd, New Delhi.
2. Benion M (1995) Introductory Foods, 10th Ed, USA.: Prentice Hall.
3. ICMR (2017), Indian Food Composition Tables Published by National Institute of Nutrition, Hyderabad.
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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Participatory Programme Management**					
Type of Course	**DSE**					
Course Code	**MG4DSEHSC201**					
Course Level	**200-299**					
Course Summary	The course on Participatory Programme Management (PPM) imparts participants with the expertise to plan, implement, and evaluate projects or programs in a strategic manner, actively engaging beneficiaries and stakeholders throughout the entire process, fostering collaboration and inclusivity for more responsive, sustainable, and effective outcomes.					
Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	A foundational understanding of project management principles and commitment to inclusive and collaborative approaches to development work.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand programme planning and related models	U	1,2
2	Apply project management techniques, incorporating SWOC analysis and utilizing network analysis.	K	3,4, 6
3	Examine assessment of programmes and documentation.	An	2, 6
4	Analyze techniques of implementing and evaluating programme.	E	2,3
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Concept of Extension Programme Planning and Participatory Planning				
1	1.1	Meaning, nature, scope and principle of programme planning.	**15**	CO1
	1.2	Elements, functions and criteria for developing a plan, Importance of planned change		CO1
	1.3	Programme development cycle and its components		CO1
	1.4	Principles, methods, tools and techniques of PRA and application of PRA methods in field studies.		CO1
	1.5	Supportive techniques – secondary sources, direct observation, and semi structured interviews, case studies and stories, drama, games, role play, scenario, workshops, triangulation, continuous analysis and reporting		CO1
	1.6	Presentation techniques – Ranking, scoring and diagrammatic.		CO1
Project Management Techniques				
2	2.1	Project management techniques	**15**	CO2
	2.2	Strength, weakness, opportunity and challenges (SWOC)		CO2
	2.3	Network analysis –critical path method (CPM), Programme (project) Management and Review Technique (PERT)		CO2
		Technical and monitory support from Government and non-governmental organizations availability and access		
	2.5	Project management and evaluation and Documentation		CO2
	2.6	Training personnel in PRA techniques		CO2
Extension Evaluation and Follow up and Documentation				
3	3.1	Definition, nature, types, purpose and characteristics of evaluation	**15**	CO3
	3.2	Phases, tools and techniques of evaluation, uses of evaluation		CO3

	3.3	Need and methods of follow up		CO3
	3.4	Analysis of existing extension programmes, prospects for improvement		CO3
	3.5	Need for reporting and recording		CO3
	3.6	Types of records		CO3
	3.7	Analysis and document preparation		CO3
	3.8	Procedures for recording – records and registers to be maintained		CO3
	3.9	Training personnel in PRA techniques, project management, evaluation and documentation.		CO3
Practical				
4	4.1	Application of PRA methods in the real-life situations.	**30**	CO4
	4.2	Critical review of evaluation studies on women and rural development programmes.		CO4
	4.3	Analysis of monitoring and evaluation of developmental programmes.		CO4
	4.4	Preparation and implementation of home improvement work plan		CO4
	4.5	Evaluation of work plan using evaluation techniques.		CO5
	4.6	Organizing and evaluating programmes for women and children at village level.		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**
Total Marks				**125**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Doe, J., Johnson, M., & Williams, S. (2015). Engaging Communities: A Handbook for Participatory Programme Management. Springer.
2. Andrea Cornwall & Garett Pratt, (2003), Pathways to Participation
3. Reflections on PRA, London Intermediate Technology Publications.
4. Robert Chambers, (1997) Who's Reality Counts – Putting the First Last, London, Intermediate Technology Publications.
5. Robert Chambers, (1997) Participatory Rural Appraisal (PRA) Challenges, Potential and Paradigms, Sussex, Institute of Development Studies.
6. Ian Scoones & John Thompson, (2004),Beyond Farmer's First, London, ITDG.
7. Andrea Cornwall & Garett Pratt, (2003) Pathways to Participation
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11. Jules Pretty, Irene Guijit, John Thompson & Ian Scoons, (1995) PLA

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1. Narayanaswamy, N. (2009). Participatory Rural Appraisal: Principles, Methods and Applications. New Delhi: Saga Publications
2. Neeta Mekherjee. (1997). Participatory Rural Appraisal: Methodology and Applications. New Delhi: Concept Publishing Company
3. Prasanna,C.(1980). Project Planning, Appraisal, Budgeting and implementation. NewDelhi: Tata Megow Hill Publishing Company Ltd
4. "Participatory Learning and Action: A Trainer's Guide" by Jules N. Pretty, Ian Scoones, and Paul C. Slaymaker.
5. "Documentation Handbook for Social Workers: A Guide to Writing, Planning, and Using Documentation" by Shannon Ruff Dirksen.

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Apparel Designing (Specialization-Textiles and Apparel Designing)**					
Type of Course	**DSE**					
Course Code	**MG4DSEHSC202**					
Course Level	**200-299**					
Course Summary	This course covers diverse aspects, including fashion illustration, detailing techniques for collars, sleeves, and pockets, fabric and accessory selection considerations, wardrobe planning, and clothing budgeting. Practical sessions involve illustrating fashion details and designing apparel styles for different occasions, enhancing students' creative and technical skills.					
Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Students should possess fundamental knowledge regarding fashion concepts					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Explain fashion drawing and figure proportions.	R	1, 2, 10
2	Explain the fashion details used in fashion illustration	U	1, 2, 10
3	Describe the process of selection of fabrics and accessories in apparel designing	U	1, 2, 6
4	Suggest factors to be considered in wardrobe planning and factors affecting the clothing budget	U	1, 6, 7
5	Illustrate the fashion details	A	1, 4, 7
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Fashion Drawing and Figure Proportions				
1	1.1	Types of fashion drawing- fashion illustration, fashion sketch, stylisation and technical drawing.	**8**	CO1
	1.2	Basic body shapes - Hour glass, Triangle, Inverted triangle, Slim rectangle, Wide rectangle.		CO1
Fashion Details				
2	2.1	Collars definition - flat collar, rolled collar, shirt collar, Stand collar	**22**	CO2
	2.2	Sleeves definition: Set -in-sleeve- plain sleeve, puff sleeve, bell sleeve. Sleeve and bodice combined: Raglan, Kimono Sleeveless style: Magyar and cap sleeve		CO2
	2.3	Pockets definition: Patch pocket, pocket in a seam, front hip pocket		CO2
	2.4	Yokes definition: Simple yoke, yoke releasing fullness, yoke supporting fullness		
	2.5	Skirts definition: Plain skirt, pleated skirt, gathered skirt, Circular skirt.		
Selection of fabric & accessories and wardrobe planning				
3	3.1	Factors influencing selection of clothing: climate, age, occassion, activity and occupation, fashion, income. Calculating the fabric requirement for basic children's and women's garments.	**15**	CO3
	3.2	Types of garment accessories: Basic accessories, Decorative accessories, Finishing accessories		CO3
	3.3	Wardrobe planning: Factors to be considered while selecting clothes for different age group, Basic guidelines for building a useful wardrobe		CO4
	3.4	Clothing budget- Factors affecting the clothing budget- Family factors, Social factors and Individual factors.		CO4
Practical				
4	4.1	Illustration of fashion details - Necklines, skirt, yoke, collars, sleeves	**30**	CO5
	4.2	Design two styles of salwar each for casual and party wear.		CO5

	4.3	Design two styles of Kameeze each for casual and party wear.		CO5
	4.4	Design two styles of nightie each with yoke and without yoke.		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

iv) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

v) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

vi) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

iii) Laboratory Evaluation (25 marks)

iv) Record (10 marks)

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1. Mary Mathews, "Practical Clothing Construction Part I & II", Paprinpack, Chennai, 2000.
2. Joseph-Armstrong, H. (2013). Patternmaking for Fashion Design. India: Pearson.
3. Kathryn Mckelvey & Janine Munslow, Illustrating Fashion Blacwell publication (2005)
4. Kathryn Micklvey & Janine Munslow, Fashion source book, Blackwell publication (2006)
5. Caroline Tatham and Julian Seaman, Fashion design drawing course, James & Hudson Publication (2003)
6. Callahan, E., Callahan, E. M., Berry, E. A. (2008). Garment Construction. United States: Wildside Press.
7. Smith, A. (2009). The Sewing Book. United Kingdom: Dorling Kindersley Limited.
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6. Rathinamoorthy, R., Surjit, R. (2015). Apparel Machinery and Equipments. India: CRC Press.
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9. Amaden-Crawford, C. (1986). A Guide to Fashion Sewing: A Detailed Illustrated Approach to Sewing. United States: Fairchild Publications.
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12. Sumathi, G. J. (2007). Elements of Fashion and Apparel Design. India: New Age International.

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Learning Disabilities (Specialization-Human Development)**
Type of Course	**DSE**
Course Code	**MG4DSEHSC203**
Course Level	**200 – 299**
Course Summary	This comprehensive course is designed to provide students with an in-depth understanding of the world of special needs children, particularly focusing on learning disabilities. It addresses key aspects from identification and classification to intervention strategies and inclusive education practices. Participants will gain insights into the Indian context, legal provisions, and contemporary issues surrounding learning disabilities.

Semester	IV	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	A foundational understanding of child development, and some basic psychological concepts.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe the various the elements under special education category.	U	1,7,10
2	Assess individual differences in learning disability.	An	1,2,7,10
3	Examine the assessment methods and interventions.	An	1,2,7,10
4	Create inclusive and supportive learning environments for students.	C	1,2,7,10

5	Develop skill in remediating children with learning disabilities	S	1,2,7,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Introduction to Learning Disability				
1	1.1	Incidence and prevalence of learning disability, provisions and concessions for the learning disabled, Assistive technology for the learning disabled	**15**	CO1
	1.2	Slow learners or educationally backward children. Characteristics of students with learning disabilities.		CO1
Variances of learning difficulties				
2	2.1	Types and classification of learning disabilities – dyslexia, dysgraphia Dyspraxia, dyscalculia, nonverbal learning disability,	**15**	CO2
	2.2	Auditory Processing disorder, Visual processing disorder, Developmental coordination disorder (DCD) Developmental language disorder (DLD)		CO2
	2.3	Academic assessment – Commonly used tests, classroom and playground observations, time-on-task assessment, language assessment, health assessment, behaviour assessment.		CO3
Intervention and remediation for learning disability				
3	3.1	Focused intervention strategies for reading, writing, mathematics, visual perception deficits, auditory processing deficits, spatial awareness deficits, conceptual deficits, memory deficits, students with poor work habits	**15**	CO3
	3.2	Intervention for other LD classroom problems like poor social relationships, ADD/ADHD.		CO3

	3.3	IEP – definition, process of writing an IEP		CO4
	3.4	Accommodations and modifications needed in fine motor skills, reading, writing, spelling and maths.		CO4
Practical - Approaches to Inclusive Education				
4	4.1	Case study of children identified with learning disability.	**30**	CO1
	4.2	Develop and display strategies/aids that will help in accommodations in the classroom for children having difficulty with (a) fine motor skills/penmanship (b) reading (c) spelling (d) maths		CO2
	4.3	Identify the learning styles of 20 children in different age group and make them aware of the strategies that will help them learn with interest.		CO3
	4.4	Prepare IEP and remedial strategies for children having problems with reading, spelling, mathematics, writing, comprehension. (Select any two and do for different age groups).		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Levine.M. (2002). A Mind at a Time. USA: Simon and Schuster Paperbacks.
2. Pohlman,C., & Robinson.M. (2010). Schools for all kinds of minds. USA: Wiley publications.
3. Mangal, S.K. (2009) Educating Exceptional Children: An Introduction to Special Education, Phi Learning.
4. Rebecca B. Evers, Spencer.S.S. (2011). Planning effective instruction. New Jersey: Pearson Education.
5. Ramaswamy.B.(2013). Learning Disability. New Delhi: Kanishka publishers.

SUGGESTED READINGS

1. What Every Special Educators Must know: Ethics, Standards, and Guidelines for Special Educators, (2009) Council for Exceptional children.
2. Accommodations, modifications and interventions –Jersey public schools.
3. Pierangelo and Giuiliani. (2014). Understanding, developing and writing effective IEPS. Corwin press.
4. Calvin and Luker. Roadmap to success. IEP. (2004). Ontario: Ministry of Education.

	Mahatma Gandhi University **Kottayam**
Programme	
Course Name	**Creative Arts in Interior Decoration**
Type of Course	**SEC**
Course Code	**MG4SECHSC200**
Course Level	**200-299**
Course Summary	This course is designed to explore the intersection of creative arts and interior decoration, providing students with the knowledge and skills to infuse artistic elements into interior spaces. Through a combination of theoretical concepts and practical applications, students will gain insights into various artistic disciplines and their integration into the field of interior design.

Semester	IV	Credits			3	**Total Hours**
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	**45**
Pre-requisites, if any	A fundamental understanding of interior design principles coupled with a passion for creative arts and a desire to explore their integration into interior spaces.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Acquire in-depth knowledge in design fundamentals to achieve creative temper to appreciate the aesthetic elements involved in the art process.	U	1
2	Gain expertise in the selection and care of furniture, furnishings and accessories.	S	1, 3
3	Create various art and craft items for decorating home through the ability to appreciate recycling and up-cycling.	C	6,7
4	Apply theoretical knowledge to promote eco friendly decor for sustainable living.	A	7,10

5	Examine the selection of lighting, colour and other fittings and incorporate these proficiently into interiors.	E	1,2
6	Develop skills for taking up professional practice and freelancing as interior design consultants.	S	4,9
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Art in Interior Design				
1	1.1	Definition and classification of design, Basic Design types – i) structural (functional) ii) ornamental (decorative) – Types / Sources for Decorative Ideas- Naturalistic, Stylized, Geometrical, Historical, Traditional, Modern, and Abstract, Development of Motifs and patterns based on various types of design and possible application in interiors.	**15**	1
	1.2	Design Fundamentals: Elements of design - Line, form, colour, texture – characteristics and artistic application of elements in interiors. Principles of design – Harmony, Proportion, Rhythm, Balance and Emphasis, Artistic application of the principles in interior.		1
	1.3	Role of the element of Colour in Interior- Characteristics of colour, Effects of Colour in Space - Shades, Tones and Tints, Cool and warm colours. Prang colour system, Psychological effect of colours and its use in the interior. Colour Schemes / Harmonies and choosing colour harmonies for room interiors.		1,5
	1.4	Lighting in Interior: Types and classification; Adequate lighting in various rooms – living room, dining room, bed room, study room, kitchen etc., indoor and outdoor lighting, sustainable lighting		2,5
Furniture, Furnishings, Accessories for Aesthetic and functional Interiors				
2	2.1	Materials for interior finishing - use, properties, selection and care- wall and floor finishes, furniture finishes.	**15**	3,5

	2.2	Furniture, Furnishings and Accessories - Selection, and Care, Factors influencing the selection - Climate, family needs and preferences, materials availability, design, principles, cost, durability etc.		2,5
	2.3	Accessories in Interior - Definition, classification, selection and placement of accessories; pictures, art, crafts, sculptures, antiques, indoor plants and flower arrangements.		3, 4
Artistic Planning and designing of the Interior Spaces				
3	3.1	Functional and aesthetic planning Personal and Group spaces in Interiors- Factors influencing, Vaastu Sastra and its uses in interior design.	**15**	2,4
	3.2	Efficient space utilization and Space saving techniques Illusions for creative space enhancement		2,4
	3.3	Choice of Style and Theme – modern, traditional, eclectic look; the positive effect of good interior design.		4
	3.4	Related Experience- Trash to Treasures - Recycling/ Up-cycling waste materials (paper, fabrics, glass bottles, plastics etc.) into artistic objects for interior beautification.		5, 6
	3.5	Port-folio making -Methods and Tips for creating effective port-folio, Content of Portfolio. Create a simple portfolio of the craft items/ photography done by the student. Digital Portfolio Presentation.		5,6
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B. End Semester Examination			
	Written Examination			**50**
Total Marks				**75**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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1. Prathap Rao M, (2015) Interior Designing – Principles and Practice Standard Publishers Distributors, Mumbai
2. Punmia B.C. (1993) Building Construction, Laxmi Publications, N. Delhi.
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5. Craig H.T and Rush C.D, Homes with Character, DC Heath and Company, Boston
6. Goldstein H and Goldstein V, Art In Everyday Life, Macmillan Company New York

	Mahatma Gandhi University **Kottayam**

Programme						
Course Name	**Women Empowerment and Gender Equity**					
Type of Course	**VAC**					
Course Code	**MG4VACHSC200**					
Course Level	**200-299**					
Course Summary	The course focuses on women empowerment and enables students to understand the skills and the intricacies involved in the process by giving better insight into the issues and problems of women and imparts legal awareness to them. It also motivates students to be empowered in all walks of their life and equip them by enhancing entrepreneurial spirit in students. This course will equip learners with the knowledge and skills to engage in gender equity work and identify and address gender equality issues in the workplace.					
Semester	**IV**	**Credits**			**3**	**Total Hours**
Course Details	**Learning Approach**	**Lecture**	**Tutorial**	**Practical**	**Others**	
		3	**-**	**-**	**-**	**45**
Pre-requisites, if any	A genuine interest in women's empowerment and gender equity, legal awareness and an entrepreneurial mindset.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Develop an awareness about the status and role of women	U	1,3,6
2	Familiarize with the issues, disparities and concerns of the marginalized especially, women.	An	3,6
3	Understand the relevance of developing effective skills for empowerment.	I	2,6
4	Get acquainted with the Human rights and laws pertaining to women and the services available to them.	U	3,6,7

5	Get motivated to work for the betterment of the marginalized, especially women.	Ap	5, 7, 8
6	Get equipped with the knowledge and skills to engage in gender equity work and identify and address gender equality issues in the society.	S	7, 9
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
An introduction into the Status of Women from a Global perspective				
1	1.1	A brief introduction into the status of women in Ancient, Medieval and Modern India, Social Reform Movements in India.	**10**	1
	1.2	Demographic profile of women with reference to health, education, employment, socio-economic and political aspects.		1
	1.3	Special issues and problems concerning women - Female foeticide and infanticide, child marriage, Dowry, Domestic violence, Sexual harassment, Gender discrimination and exploitation by media.		2
	1.4	Women in distress - Problems of single, widowed, divorced women, unmarried mothers and elderly women.		2
Women Empowerment and Protection				
2	2.1	Women Empowerment- Concept and significance, Multiple Roles of Women, Role conflict and Role changes.	**18**	3,5
	2.2	National efforts for women empowerment - National policy on women, National and State Commission for Women, Organizations for Women. NGOs and women development, Self Help Groups and other Micro-economic programme for empowerment.		3, 4
	2.3	Human Rights as Women's Rights, Indian constitution and provisions relating to women. Dealing with Disability- State policy.		4, 5
	2.4	Health Policies in India: Rights of Women regarding their bodies (Surrogacy – Reproductive Health, etc).		4, 5

	2.5	Women and Law- Need for legal literacy, Awareness on the Laws pertaining to Marriage, Divorce, Dowry, Succession/ Property rights, Immoral Traffic and Abortion, Indecent Representation of Women, Domestic Violence, Sexual Harassment/ Vishaka Guidelines (Sexual Harassment at Workplace Laws), Family courts.		4, 5
Gender Equality and Equity				
3	3.1	Issues and Debates on the participation of Women in Politics, Labour / Work Force- Wage disparity, Women in Science & Technology, Gender Representation in Arts, Literature and Media.	**17**	5, 6
	3.2	Significance of Gender Studies, Gender bias, Gender Mainstreaming: Issues and Debates, Gender Equity, Gender Justice, Section 377 and the Supreme Court Judgement: Decriminalising Sexuality.		5,6
	3.3	Impact of Globalization on Women, Eco-Feminism. Transition of women towards the new millennium.		1,6
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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14. Utpal Kumar De and Bhola Nath Ghosh (2004), Issues on Empowerment of Women. Mohit Publication, New Delhi.

SUGGESTED READINGS:

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3. Indian Journal of Gender Studies, Centre for Women's Development Studies, New Delhi, Sage Publications, New Delhi.
4. Vijay Kumar S. (Editor), Indian Journal of Social Development- An International Journal Serial Publication, New Delhi

SEMESTER-5

MGU-UGP (HONOURS)

Syllabus

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Clinical Nutrition and Dietetics**
Type of Course	**DSC A**
Course Code	**MG5DSCHSC300**
Course Level	**300-399**
Course Summary	The course prepares students to use advanced knowledge about food and nutrition for prevention as well as treatment of diseases and also maintain human health. Dietetics focuses on food management through proper planning, preparation, monitoring, implementation and supervision of a patient's modified diet and to develop basic counselling skills as dietitian and gain an insight into prevailing public health nutrition problems.

Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Basic awareness on nutrition					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Integrate knowledge of principles and methods associated with nutrition and dietetics.	U	1,7,10
2	Collect, organize and assess data relating to the health and nutritional status of individuals, groups and populations.	An	1, 2, 6, 7, 10
3	Evaluate different nutritional interventions for managing symptoms and supporting immune function in fever and HIV/AIDS conditions.	E	1, 2, 3, 6,10
4	Design a community-based nutrition program aimed at preventing and managing lifestyle diseases, incorporating education, behavior change strategies, and access to healthy food options.	C	2, 6, 10
5	Describe the impact of specific nutrients and dietary factors on gastro intestinal and renal health.	U	2, 6, 7, 10

6	Develop skill to plan and prepare therapeutic diets for prevention of disease conditions	C	2, 6, 7, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Concepts in Diet Therapy & Medical Nutrition Therapy in Fever and HIV/Aids				
1	1.1	Growth and Scope of Dietetics Modifications of Normal Diets, Classification of Therapeutic Diets Routine Hospital Diets	**12**	CO1
	1.2	Dietician- Classification and responsibilities Nutrition Care Process (NCP)		CO1
	1.3	Assessment of Nutritional status, Diet therapy and Diet Counseling Critical Care Nutrition-Oral, Enteral and Parenteral Feeding Gut Micro biome -Role of Pre and Probiotics		CO2
	1.4	Classification and Aetiology of acute and chronic fevers- Medical Nutrition Therapy in Typhoid and Tuberculosis		CO3
	1.5	Aetiology, Symptoms and Dietary Management in HIV/AIDS Role of Diet and Immunity		CO3
Medical Nutrition Therapy in Lifestyle Diseases				
2	2.1	Nutrition Transition in India Weight management- Etiology, Pathophysiology, Clinical symptoms, metabolic alterations, Assessment/Indicators, Lifestyle & Dietary guidelines	**15**	CO4
	2.2	Diabetes Mellitus - Prevalence, Classification and Etiology, Symptoms and Diagnosis Acute and Chronic Complications of Diabetes Diet Modifications, Use of Food Exchange Lists, Insulin-Types and Use, Oral Hypoglycaemic Agents, Glycaemic Index, Glycaemic Load)		CO4
	2.3	Coronary Artery Diseases (CAD)- Atherosclerosis-Phases, Aetiology, Symptoms, Complications, dietary and Medical Management Hypertension- Classification, Aetiology, Complications, Dietary Management -DASH Diet Metabolic Syndrome		CO4
	2.4	Cancer-Aetiology, Risk Factors-Dietary and Non-Dietary Nutritional Requirements in cancer, Dietary and Medical Management in cancer, Functional Foods		CO4

Medical Nutrition Therapy in Renal Disorders & Gastro Intestinal Disorders				
3	3.1	Aetiology, Pathophysiology, Clinical Symptoms, Assessment/Indicators, Lifestyle & Dietary guidelines for the following conditions- Glomerulonephritis	**18**	CO5
	3.2	Nephrotic Syndrome		C05
	3.3	Acute and Chronic Renal Failure		C05
	3.4	Aetiology, risk factors, clinical symptoms and dietary management in NAFLD-Non-Alcoholic Fatty Liver Disease MAFLD-Metabolism Associated Fatty Liver Disease		CO5
	3.5	Aetiology, risk factors, clinical symptoms and dietary management in-Hepatitis, Cirrhosis and hepatic Coma		CO5
	3.6	Aetiology, risk factors, clinical symptoms and dietary management in-Diarrhoea, Constipation, Peptic Ulcer and GERD Inflammatory Bowel Disorders		CO5
Practical				
4	4.1	Visit/Virtual tour to Hospital Dietary Department Preparation of Hospital Diets- Modification of diet with respect to texture, consistency and nutrients	**30**	CO6
	4.2	Modification of Diets in Obesity		CO6
	4.3	Modification of Diets in Underweight		CO6
	4.4	Modification of Diets in Diabetes Mellitus		CO6
	4.5	Diets for Febrile Conditions – TB, Typhoid		CO6
	4.6	Modification of Diets in Peptic Ulcer, Constipation and Diarrhoea		CO6
	4.7	Modifications of Diets in Liver Diseases – Jaundice, Hepatitis and Cirrhosis		CO6
	4.8	Diets for Nephritis, renal Failure - Protein Restricted Diets		CO6
	4.9	Diets for Cardiovascular diseases – Sodium Restricted, Fat Restricted		CO6
	4.10	Modification of Diet for Cancer Patients and HIV Infected Person		CO6
	4.11	An Overview/desk review on DASH diet, Mediterranean diet, Paleo diet, FODMAP diet, Keto diet VLCD		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		**Mode of Transaction**	
	1,2,3,4		**Lecture, Demonstration and practical Assignments**	
	Mode of assessment			
	Continuous Comprehensive Assessment (CCA)			
	Learning approach	**Formative Assessment (FA)**	**Summative Assessment (SA)**	**Marks**
	Lecture	**In-class discussion/Group tutorial work**		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	**Observation of practical skills**		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Resource Management and Consumer Studies**
Type of Course	**DSC A**
Course Code	**MG5DSCHSC301**
Course Level	**300-399**
Course Summary	Resources and their management is the ultimate goal of all families. The Course introduces the conceptual and contextual meaning of resources and their management in micro level family settings in the changing world in a simple format with experiential learning to the learners. Consumer is the king in the consumer market. Consumers' behaviour and attitude reflects their living styles which *per se* will be the delineation of their family finance management practices. The Course exposes students to real life situations for realizing their role as consumers as well as financial managers in family settings.

Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30+ 75**
Pre-requisites, if any	Interest in resource management					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand on the concepts related to family resource management	U	3,4,5
2	Evaluate the significance of decision making and management process in efficient use of resources	U	1,2,3,

3	Analyse on management of human energy, time, and money as a family resource.	An	2,4,5,
4	Understand the type of natural resources and the impact of human activities on natural resources Create awareness to Emerge as informed consumers	U	3,6.7
5	Evaluate resource and event management skills	E	8,9
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Home Management: Management of resources and decision making				
1	1.1	Introduction to home management- meaning, definitions, scope of family resource management essential qualities for manager.	15	CO1
	1.2	Motivating factors in management – Values, Standards and Goals – meaning, types. Theories of Motivation- Maslow's hierarchy of needs theory.		CO1
	1.3	Family Resources- Concept, classification- Human and non-human resources, characteristics of family resources. Factors affecting utilization of family resources, Maximizing use of resources and resource conservation.		CO1
	1.4	Decision Making- the crux of management, Types of decisions; Steps in decision making.		CO2
	1.5	Management process: Definitions and steps in management process: Planning, Controlling, Organizing and Evaluation Significance of managing resources of the family, Application of Management Processes in: Event Planning &Execution		CO2
Optimizing and Effective Management of Life Resources				
2	2.1	Money- sources of income, types of income, steps in money management, Budgeting- budget items, methods of handling money	**15**	CO3
	2.2	Time – concept of time schedule, time norms and peak loads		CO3
	2.3	Energy – Types of effort (Manual, pedal, visual etc)., Concept of body posture, classification of activities		CO3

		(sedentary, moderate and heavy), use of labour saving devices in management of time and energy, causes of fatigue, methods of alleviating fatigue		
	2.4	Methods of harnessing renewable resources for residential use-solar water heater, photo voltaic cell, solar cooker, solar dryer.		CO4
	2.5	Waste management: home level solid and liquid waste management practices		CO4
Consumer studies				
	3.1	Consumer: definition and meaning, buying motives – types; consumer buying process; Consumer problems – types and solutions Consumer education Consumer aids: classification – Labels, Trademarks, Brand Names, Patents, Warranty, Guarantee, Unfair consumer practices: adulteration and faulty weights and measures, Consumer redressal	**15**	CO4
	3.2	Green Consumerism-Meaning and importance with respect to consumerism, Consumer rights and responsibilities in India Standardization and quality control measures: Role of ISI, FPO, AGMARK, ISO, Eco mark, Wool mark, Silk mark, Cotton mark, Handloom mark,		CO4
Practical				
4	4.1	Preparation of time plans for self and family Drafting family budget for different income groups	**30**	CO5
	4.2	Assessment of working heights Market survey on labour saving devices		CO5
	4.3	Visit to a renewable energy resource centre to experience solar energy/rain water harvesting/ waste management. Visit vermi compost centre/ waste management initiatives		CO5
	4.4	Event Management -Planning, organizing, implementing and evaluating a group event: exhibition/cottage stay/ study tour		CO5
	4.5	Development and evaluation of Labels / Advertisements for consumer products Prepare a consumer complaint		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)
ii) Record (10 marks)

REFERENCES

1. Bhargava, B. (2005). *Family Resource Management and Interior Decoration*, Jaipur: Apple Printer and V. R. Printers

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Textile Science**
Type of Course	**DSC A**
Course Code	**MG5DSCHSC302**
Course Level	**300-399**
Course Summary	This course covers the basic concepts of textile fibres, textile yarns, fabric construction methods, printing, dyeing and fabric finishes and providing students with a comprehensive understanding of the science of textiles. Complete knowledge of textiles will develop the ability to distinguish quality in fabrics and in turn, to appreciate the proper uses for the different qualities.

Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	**60**
Pre-requisites, if any	Basic understanding of textiles - anything made of fabric, thread, yarn and fibre.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Examine the properties, and uses of major and minor textile fibres.	An	2, 4, ,710
2	Assess the processes of yarn making and characteristics of different types of yarns	An	1, 4, 5, 10
3	Explain weaving with conventional and automated shuttle less loom and the characteristics of different weaving patterns.	U	1, 4, 5, 10
4	Demonstrate different type of fabric construction techniques other than weaving.	U	1, 4, 5, 10
5	Understand dyes and finishes suitable for different textiles.	U	1, 7, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Study of Fibres and Yarns				
1	1.1	Fibre-Definition, primary and secondary properties Classification of textile fibres. Properties and uses of major textile fibres -cotton, linen, silk, wool, rayon, nylon, and polyester, acrylic, lyocell, organic cotton, jute and spandex. Methods of identification of textile fibres -visual inspection, microscopic test and burning test.	**15**	CO1
	1.2	Definition, process of making fibre into yarn-hand, mechanical-conventional ring spinning, direct-open-end spinning and chemical. Classification of yarns: Types- spun and filament. Number of parts- simple, complex. Twist- Amount and direction. Yarn count – Indirect and indirect. Textured yarns, bi-component yarns, blends and mixtures.		CO2
	1.3	Collection of fibres, Identification of textile fibres		CO1
	1.4	Collection of simple and complex yarns		CO2
Study of Fabric structure				
2	2.1	Weaving- Loom- parts and basic weaving motions A brief introduction to shuttle less looms- projectile, rapier, and jet looms.	**15**	CO3
	2.2	Basic weaves- plain, twill, satin and its variations. Fancy Weaves-, pile, jacquard, dobby, lappet, clip spot, leno, crepe, and double cloth.		CO3
	2.3	Characteristics of woven fabrics –warp and weft, grain, selvedge, thread count and balance		CO3
	2.4	Other methods of fabric construction-knitting, felting, nonwovens, lace making, netting, bonding, and braiding. Recent developments- Smart fabrics, Technical textiles, Nano-textiles		CO4
	2.5	Collection of fabrics- Basic weaves and novelty weaves and fabrics of different counts		CO3
Fabric Dyeing and Printing				
3	3.1	Classification of dyes: Natural and artificial- acid, basic, direct, disperse, vat, naphthol, pigment, sulphur, and mordant.	**15**	CO5
	3.2	Stages of dyeing-stock, top, yarn, piece - cross and union dyeing, product, solution dyeing.		CO5

	3.3	Printing: -Direct- roller, block, screen and stencil. Resist- tie & dye, batik, and Discharge printing.		CO5
	3.4	Preparation of samples for Block, Stencil, Batik and Tie & Dye		CO5
Fabric Finishes				
4	4.1	Finishes-Definition, purpose. Classification	**15**	CO5
	4.2	Types-singeing, bleaching, mercerization, tentering, stiffening, napping, calendaring-simple, glazed. embossed, moiré, schreiner, sanforising, beetling, sizing, weighting, shearing, fulling and crepe		CO5
	4.3	Special finishes-water proofing, flame proofing, antibacterial finish, stain resistant finish, shrinkage control and crease resistant		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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	Mahatma Gandhi University Kottayam
Programme	**BSc (Hons) Home Science**
Course Name	**Family Studies (Specialization-Human Development)**
Type of Course	**DSE**
Course Code	**MG5DSEHSC300**
Course Level	**300-399**
Course Summary	This comprehensive course on Family Studies is designed to provide students with a deep understanding of the dynamics, structures, and functions of families in contemporary society

Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	A foundational understanding of human development, sociology, legal aspects related to marriage and family, public health or gerontology, and family studies.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Interpret the characteristics, responsibilities, changes, and adaptations in adulthood.	A	1,10
2	Evaluate the effectiveness of interpersonal communication within different family structures and the parenting styles.	An	4,10
3	Analyse the effects of family crises on the well-being of children, adolescents, and adults.	A	7, 6, 10
4	Examine the effectiveness of communication styles and the agencies offering support in promoting family cohesion.	An	4, 10, 6
5	Assess the role of geriatric care in addressing the specific needs of ageing individuals.	An	7,10
6	Develop skills to apply the knowledge gathered in addressing the issues related to human development and family dynamics	S	10, 3
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Adulthood and Family				
1			**16**	
	1.1	Definition, characteristics, stages, changes in various domains of development, roles, responsibilities, adaptations and adjustments in work and family, changes in lifestyle, midlife crisis, approaching retirement, emotional maturity and subjective well being		CO1
	1.2	Marriage – mate selection, Institution, traditional and modern marriages, laws pertaining to marriage, adjustments and adaptations, population education in the current scenario		CO1
	1.3	Develop a questionnaire on any issue relating to the challenges in adulthood and conduct a survey on the same and report.		CO1
	1.4	Conduct an anthropological study on the different communities present in your locality in relation to family types and marriage customs.		CO1
Dynamics of Family				
2	2.1	Family – definition, stages, family life cycle, interpersonal communication within families, managing expectations, self goals and adjustments	**14**	CO2
	2.2	Parent child relationships – importance, parenting styles, parental attitudes, responsible parenthood, influence of parents on the personality and behaviour of children, modern families – challenges and solutions		CO2
	2.3	Prepare a handbook on developmental milestones throughout the lifespan		CO2
3		**Family crisis**	**15**	
	3.1	Divorce, death, separation, financial instability, illness, death, family violence, suicide, unemployment, natural disasters, epidemics		CO3
	3.2	Maternal employment, globalisation, immigration and migration, single and lone parenthood, blended and reconstituted families, media addiction – influence and problems among children and adolescents		CO3
	3.3	Prepare review articles related to contemporary issues affecting families		CO3
Ageing in the new millennium				
4	4.1	Definition, characteristics, adjustments - self, family, vocation, retirement, singlehood; needs and conditions contributing to happiness in old age	15	CO5

	4.2	Common problems and abuses among elderly, geriatric care, family caregiving – second parenting, social security and support services for the aged.		CO5
	4.3	Visit to an elderly care centre and make a case study presentation.		CO5
	4.4	Review newspaper articles related to incidents of different types of abuse in families.		CO5
5	5	Teacher Specific Content This content will be evaluated internally		

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

1. Mc Kenry P, & Price S. (2005). Families and Change: Coping with Stressful Events. (3rd ed.). New York: Sage Publication.
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Suggested Readings

1. Johnson Elle Olivia, [2012], The Parent's Guide to In-Home ABA Programs, Jessica Kingsley Publishers.
2. Rajaratnam Aarti C., Brinda Jayaraman (2013), Parenting: Innocence to Innersense, Notion Press
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4. Aurbach Stevanne (2011), Child Care: A Comprehensive Guide, Volume 1, I Universe
5. Lichtman Louis J (2011), A Practical Guide for Raising a Self-Directed and Caring Child: An Alternative to the Tiger Mother Parenting Style, iUniverse.
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7. Lavania, V. (2006). Childless Couples: Social Consequences of Sterility & Infertility, Jaipur: Rawat Publications.
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12. Uberoi, P. (1994). Family, Kinship and Marriage in India. New Delhi: Oxford University Press.

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Applied Extension Education**					
Type of Course	**DSE**					
Course Code	**MG5DSEHSC301**					
Course Level	**300-399**					
Course Summary	Participants will be able to apply extension education principles to address real-world challenges, develop effective outreach programs, and assess the impact of extension activities.					
Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Interest in Extension education					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Comprehend the foundations of Extension Education by identifying key principles and concepts.	U	1
2	Demonstrate the capacity to align extension activities with predefined outcomes.	A	2
3	Identify relevant stakeholders involved in extension activities.	U	2
4	Design and plan extension activities using appropriate teaching methodologies.	K	2
5	Apply analytical skills to assess the impact and effectiveness of extension activities, facilitate participatory approaches, and utilize learned concepts to develop a comprehensive extension project.	A	6,2
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Understanding Extension Education				
1	1.1	Overview of Extension Education	**10**	CO1
	1.2	Importance and relevance of extension activities.		CO1
	1.3	Historical development and evolution		CO1
Principles of OBE in Extension Education				
2	2.1	Introduction to Outcome-Based Education (OBE)	**10**	CO2
	2.2	Aligning extension activities with learning outcomes.		CO2
	2.3	Developing measurable objectives.		CO2
Program Planning and Design				
3	3.1	Stakeholder Analysis and Needs Assessment Identifying and analysing stakeholders	**20**	CO3
	3.2	Conducting needs assessments in extension education		CO3
	3.3	Case studies and practical exercises		CO3
	3.4	Developing Extension Programs Formulating program goals and objectives Designing extension activities Selecting appropriate teaching methodologies		CO3
	3.5	Budgeting for extension programs Efficient resource allocation.		CO3
Communication and Outreach Strategies				
4	4.1	Effective Communication in Extension, Importance of effective communication Developing communication strategies, LFA and pitch deck ppt- Using technology in extension communication.	**20**	CO4
	4.1	Techniques for community engagement Facilitating participatory approaches in extension Case studies on successful community participation		CO5

	4.2	Effective Communication in Extension, Importance of effective communication Developing communication strategies,LFA and pitch deck ppt- Using technology in extension communication		CO5
	4.3	Techniques for community engagement Facilitating participatory approaches in extension Case studies on successful community participation		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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2. Boyd, M. H., & Martin, P. L. (2015). Adult Education: A Practical Guide for Educators, Trainers, and Researchers. John Wiley & Sons.

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5. Van den Ban, A. W., & Hawkins, H. S. (1996). Agriculture Extension: The Training and Visit System. Food and Agriculture Organization of the United Nations.

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7. Rogers, E. M. (2003). Diffusion of Innovations. Free Press.

8. Tomek, G., & Hronec, S. (2014). Community Development and Education: A Shared Future. Palgrave Macmillan.

9. Caffarella, R. S., & Daffron, S. R. (2013). Planning Programs for Adult Learners: A Practical Guide for Educators, Trainers, and Staff Developers. John Wiley & Sons.

10. Shinde, K. V. (2016). Extension Teaching Methods. Agrotech Publishing Academy.
11. Welsh, E. (2014). Adult Education and the Postmodern Challenge: Learning Beyond the Limits. Routledge.
12. Chambers, R. (1997). Whose Reality Counts? Putting the First Last. Intermediate Technology Publications.
13. Chapman, D. W., & Lindner, J. R. (2017). Advancing Research Methods with New Technologies. IGI Global.
14. Ramanjaneyulu, G., & Galab, S. (2018). Understanding Farmer Behavior: A Systems Approach to the Diagnosis and Design of Interventions. Academic Foundation.
15. Horton, D. (2015). The Politics of Policy Change: Welfare, Medicare, and Social Security Reform in the United States. Oxford University Press.

SUGGESTED READINGS

1. "A Handbook of Extension Education" by Ahmed Osman and Mohd Jamil Zakaria Abidin
2. "Agriculture Extension: The Training and Visit System" by A. W. Van den Ban and H. S. Hawkins
3. "Planning and Developing Programs and Services for Extension and Outreach" by Rama B. Radhakrishna and Charles A. Martin
4. "Extension Teaching Methods" by K. V. Shinde
5. "Character Development in Schools and Beyond" by George E. Moore and Thomas Lickona
6. "Diffusion of Innovations" by Everett M. Rogers
7. "Community Development and Education: A Shared Future" by Gary Tomek and Steven Hronec
8. "Adult Education: A Practical Guide for Educators, Trainers, and Researchers" by Michael H. Boyd and Paul L. Martin
9. "Whose Reality Counts? Putting the First Last" by Robert Chambers
10. "Planning Programs for Adult Learners: A Practical Guide for Educators, Trainers, and Staff Developers" by Rosemary S. Caffarella and Sandra Ratcliff Daffron

	Mahatma Gandhi University Kottayam

Programme	**BSc (Hons) Home Science**					
Course Name	**Human Physiology and Microbiology (Specialization-Food Nutrition and Dietetics)**					
Type of Course	**DSE**					
Course Code	**MG5DSEHSC302**					
Course Level	**300 - 399**					
Course Summary	The students understand the principles of Foods and Nutrition through the study of integrated functions of the various systems of the human body; digestion and absorption of nutrients and the action of various hormones. Students enable to realize the economic importance of microorganisms; basic concepts of microbiology and to understand the principles of various methods used in the prevention and control of micro-organisms.					
Semester	**V**	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	A strong understanding of basic biology is essential, familiarity with human anatomy provides the structural foundation for understanding physiological processes. knowledge of organs, tissues, and systems of the human body.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Recognizing the functioning of various systems in the human body.	K	1
2	Understand the mechanism of the digestion and absorption of different nutrients in the body	U	2
3	Explain the role of hormones and its effect during imbalances in the human body.	U	2
4	Analyse the basic concepts of food microbiology, infections and defence mechanisms in the human body	A	10
5	Analyse the marketability of new food products.	A	10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
1	1.1	**Cardiovascular and Respiratory System** Cell as a unit of the body, Cell organelles and their functions. Blood: Composition and its functions, Haemoglobin, Coagulation of blood, Blood groups Structure of heart, Circulation (Systemic, pulmonary, coronary and portal system) Cardiac cycle, Cardiac output, Blood pressure, Myocardial infarction. Structure of respiratory system, hypoxia, lung volume and capacities	10	CO 1
2	2.1	**Digestive and Excretory System** Structure and functions of stomach. Digestion and absorption of CHO, protein and fats. Liver, Gallbladder, Pancreas, function and regulation of gastric intestinal secretion. Structure and function of kidney, Nephron, Mechanism of Urine formation, role of kidneys in homeostasis.	10	CO 1
3	3.1	**Endocrine and Reproductive System** Endocrine glands and hormones in brief, Action and disorder of pituitary, thyroid, Adrenal and pancreatic hormones. Structure and functions of male and female reproductive system. Physiology of Menstruation and Menopause	20	CO 3
4	4.1	**Basic concepts of Microbiology, Infection and Immunity** Classification of microorganisms, important microorganisms- Structure and economic importance of microorganism-bacteria, yeast. Factors affecting the growth of microorganisms, Culture media and culture techniques, Isolation and identification, grams staining. Sterilization and disinfection- definition and method. Sources of microorganisms, Transmission of infection, bacterial infections in man: typhoid, Pneumonia. Viral infections – Hepatitis, AIDS.	20	CO 2

		Natural defences of the body—primary and secondary defence mechanisms. Immunity types, Immunization followed for various Diseases		
5 Teacher Specific content Written Examination Practical session, Class room Teaching, Lab visits etc.				

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	B. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	C. End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

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SUGGESTED READINGS

1. Guyton and Hall. 2020. Textbook of Medical Medical Physiology, 14th Edition, Elsevier
2. C.C. Chatterjee. 2020. Human Physiology, Vol I and II. 14th Edition, CBS Publisher.
3. Frazier, W.C, Food Microbiology, McGraw Hill Publication, New York, 10th Edition, 1998.

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Fashion Marketing (Specialization-Textiles and Apparel Designing)**					
Type of Course	**DSE**					
Course Code	**MG5DSEHSC303**					
Course Level	**300-399**					
Course Summary	This course provides a comprehensive overview of marketing principles and strategies tailored specifically to the fashion industry, along with insights into retail management practices.					
Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Students should possess the basic understanding about the fashion concepts					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Explain fashion market and consumer groups in fashion	U	1, 2, 7, 10
2	Comprehend the product development and pricing strategies	U	1,3,4, 10
3	Analyse the distribution channels and promotion mix	An	1, 2, 3, 4
4	Evaluate different types of retail stores	E	1, 3, 4, 10
5	Apply visual merchandising concepts in store design	A	1, 2, 7, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Marketing				
1	1.1	Meaning and classification of Marketing, fashion Marketing, Marketing Calendar Marketing Mix – Product, Price, Place, and Promotion	**20**	CO1
	1.2	Fashion Market – Size and structure, Marketing environment – Micro and macro marketing environment		CO1
	1.3	Consumer Groups - Demographic Trends & Psychographic Trends, Consumer spending – Personal Income, Disposable Income, Discretionary Income, Purchasing Power, Factors influencing consumer behaviour.		CO1
Product mix and Pricing				
2	2.1	Product Mix, Product Life Cycle, New Product Development	**10**	CO2
	2.2	Concept and importance of pricing, Factors affecting pricing decisions, Pricing strategies, Methods of pricing		CO2
Distribution channels and Promotion mix				
3	3.1	Distribution Channels: Types, Levels.	**10**	CO3
	3.2	Promotion Mix- sales promotion, advertising, branding, public relation, special events		CO3
Retail Stores				
4	4.1	Retail stores– Definition – functions of retailing – Classification of Retailers– Types of Retail operations – (1) Specialty stores- Single brand or Private label retailers, Secondary spin-offs, (2) Department stores, (3) Mass Merchants – Discounters, Off-Price retailers, Outlet stores, Warehouse clubs, (4) Promotional stores, (5) Non store retailing - Mail order merchants, Party plan retailing, Electronic retailing, Television shopping, Online shopping.	**20**	CO4
	4.2	Retail store design - Importance of retail store design. Visual merchandising- Signage, Merchandise Presentation, Types of display, Lightings, Mannequins and props, Fixtures		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

1. Posner.H (2015)- Marketing Fashion – Laurence King Publishing – London.
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5. Kitty G. Dickerson, Inside The Fashion Business, 7th Edition, 2003 Prentice hall

SUGGESTED READINGS

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2. Jay Diamond; Ellon Diamond, The World of Fashion , 2007, Fairchild.
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6. John Giacobello, Careers in fashion Industry, 2000, Rosel Pub. Group
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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Product Development and Marketing**
Type of Course	**DSE**
Course Code	**MG5DSEHSC304**
Course Level	**300 - 399**
Course Summary	The students are imparted theoretical and practical knowledge of preparing bakery related products; knowledge of the ingredients used and undertakes the costing part of it. Students also apply knowledge in hygiene and faults and remedial measures, major and minor equipments used, setting up of a bakery unit making this course a lucrative field of study.

Semester	**V**	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	**60**
Pre-requisites, if any	Prior knowledge in bakery product preparation, ingredient understanding, costing, hygiene, fault identification, equipment usage, and bakery unit setup is required for this course.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Identify new marketable, nutritionally and economically viable food products .	K	1
2	Develop entrepreneurship skills for setting up small scale food industries.	U	2
3	Understand packaging of different food products.	U	2
4	Conduct sensory evaluation of new products .	A	10
5	Analyse the marketability of new food products.	A	10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
1	1.1	**Food Consumption Pattern** Trends in food consumption pattern. Economical, psychological and sociological dimensions of food. Trends in lifestyle changes as a base for new product development.	10	CO 1
2	2.1	**Introduction to Food Processing and Product Development** Food componenets, Types of food processing. Status of food processing industry in India. Scope of growth in future. Principles and purpose of new product development. Product design and specifications.	10	CO 1
3	3.1	**Testing, evaluation and packaging of products** Standardisation, portion size, portion control, Quantity cooking, shelf life evaluation. Sensory and microbial testing of processed foods, Nutrient analysis, Packaging materials for foods, SWOT analysis.	20	CO 3
4	4.1	**Financial management and marketing of food products** Institutional support(Training and finance) for Entrepreneurship Development, Financial Institutions(Central and State Govt.),Banks, Funding agencies, Financial accounting procedures, Book keeping, Market research, Marketting strategies, Cost calculation, Advertisisng methods, Product sales, Product license, Legal specifications, Consumer Behaviour, Food Acceptance.	20	CO 2
5	Teacher Specific content Written Examination Term Submission - (Swatch file/Record/Portfolio/Script/Video/e-content/Case study etc.)			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	C. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	D. End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

1. Fuller, Gordon ,W(2015)New Food Product Development.2nd edition. CRC Press. Boca Raton, Florida.
2. Schaffner. D.J, Schroder, W.R(2010)Food Marketing and international perspectives, Mc Graw Hill Publications

SUGGESTED READINGS

1. Suja R Nair (2014) Consumer Behaviour and Marketing Research, 1st edition,Himalaya Publishers.
2. Hmacfie (2017) Consumer led food product development, Weedhead Publishing Limited, U.K

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Development Communication**
Type of Course	**DSE**
Course Code	**MG5DSEHSC305**
Course Level	**300-399**
Course Summary	This course on Development Communication explores fundamental concepts, media roles, and diverse approaches in fostering effective development. Participants gain practical skills in photography, video production, and reporting, enhancing their understanding of how communication contributes to sustainable development.

Semester	V	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Interest in Extension education					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand the concept and process of development	U	1,2
2	Gain knowledge on development communication	K	3,5
3	Learn the importance media in development communication	I	3,7
4	Acquire skills on Information Education and Communication (IEC) technologies and media	A	4,5,6

5	Develop the ability to critically analyze the intricate role of communication within development processes.	C	1,9,7
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Development Communication				
1	1.1	Definition, basic concept, nature, significance and functions and dysfunctions, dynamics of development	**15**	CO1
	1.2	Philosophy of and principles of development communication.		CO1
	1.3	Methods of Communication.		CO1
Approaches to Development Communication				
2	2.1	Meaning, nature, role and characteristics of development communication	15	CO1
	2.2	Interrelationship between development and development communication		CO5
	2.3	Diffusion / extension approach, Mass media approach, development support communication, approach, institution approach, integrated approach and localized approach		CO5
Media and Development Communication				
3	3.1	Traditional media – types, characteristic role in development communication	**15**	CO3
	3.2	Development reporting – roles and responsibilities of development reporter, ethics in reporting, required skills and issues in development reporting		CO2
	3.3	News reporting – definition of news, ingredients and qualities of news, news value, types of news reports, structure of news reports		CO4
	3.4	Radio news, features and commentaries, radio and development communication		CO4

	3.5	Television and cinema – role in development communication		CO5
	3.6	ICTS – scope in development communication		CO4
Skills for Development Communication				
4	4.1	Photography - basic principles, preplanning, scripting, shooting, recording of commentary or dialogue	**15**	CO1
	4.2	Video films – essential preliminaries, procedure, scripting and shooting		CO7
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	D. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B. End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

1. Capila.A. (2001). Images of Women in the Folk Songs of Garhwal Himalayass. New Delhi: Concept Publishers
2. Communication for Development in the Third World Theory and Practices (1991). New Delhi: Sage Publications
3. Dhanraj patil. (2010). Communication for rural development in India. New Delhi: Serials Publications
4. Gupta.D. (2007). Development Communication in Rural Sector. New Delhi: Mukhopadhyay, Abhijeet Publication
5. Joshi Uma. (1997). Textbook of Mass Communication and Media. New Delhi: Anmol Publications
6. Joshi Uma. (2001). Understanding Development Communication. New Delhi: Domincent Publishers
7. Karun Shetty. (2011). Communication for Social Change. New Delhi: Pacific publication
8. Nisha,M. (2006). Understanding Extension Education. New Delhi: Kalpay Publications
9. Reddy, A.A. (2001). Extension Education. Bapatla: Sri Lakshmi Press
10. Singh, U.K., and Nayak A.K. (2007). Extension Education. New Delhi: Common Wealth Publishers

SUGGESTED READINGS

1. Development Communication: Reframing the Role of the Media" by Thomas L. McPhail
2. "Communication for Development and Social Change" by Jan Servaes
3. "Theories of Development Communication" by Srinivas R. Melkote and H. Leslie Steeves

	Mahatma Gandhi University **Kottayam**
Programme	
Course Name	**Surface Ornamentation**
Type of Course	**SEC**
Course Code	**MG5SECHSC300**
Course Level	**300-399**
Course Summary	This course in surface ornamentation encompasses fundamental hand embroidery techniques, stitches, and specialized methods. Students learn flat, looped, and knotted stitches, explore Aari embroidery and counted thread techniques, and delve into various traditional Indian embroidery styles.

Semester	V	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	45
Pre-requisites, if any	Students should possess fundamental sewing skills, knowledge of basic stitches.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe the process involved in the preparation for fabric surface ornamentation process	U	1, 9, 10
2	Explain the process of working basic hand embroidery stitches	U	1, 3, 10
3	Comprehend the application of aari embroidery, counted thread embroidery, applique work and Indian traditional embroideries.	U	1, 2, 3
4	Create an embroidery folder containing different embroidery techniques	A	1, 3. 10
Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Basics of surface ornamentation				
1	1.1	Surface ornamentation techniques. Introduction to hand embroidery. Tools used for embroidery. Selection of needles, threads and fabric	**15**	CO1
	1.2	Enlargement & Reduction of Designs Preparation of fabric. Tracing methods: carbon paper, tissue paper, tracing paper, water soluble pen, tracing box (light box), hot pressing and wooden block method.		CO1
	1.3	Basic hand embroidery stitches- Flat Stitches: Running, stem, satin, back, shade work, hemming bone. Looped Stitches: Chain, lazy-daisy, fly, Feather, blanket, button hole. Knotted Stitches: French knot, coral knot, bullion, pistil stitch (Palestrina stitch)		CO2
Special embroidery techniques				
2	2.1	Aari embroidery basic stitches and its variations using silk thread and metallic thread: Chain stitch, Zigzag stitch, Chain with zigzag stitch, Button hole stitch, Shade work. Application of Stone work, Metallic Thread, Embroidery, Beads & Sequins.	**15**	CO3
	2.2	Counted thread embroidery: Assisi work, Counted cross stitch, Black work, drawn thread work. Applique work, Cut work, Ribbon work, shadow work, smocking, French smocking.		CO3
	2.3	Indian traditional embroidery: Phulkari of Punjab, kantha of Bengal, kasuti of Karnataka, chikankari of Luckhnow, kashida of Kashmir, chamba of Himachal, kutch of Karnataka		CO3
Traditional embroidery techniques				
	3.1	Basic Hand Embroidery Stitches: Introduction to basic hand embroidery stitches. Overview of commonly used stitches such as backstitch, running stitch, satin stitch, etc.	**15**	

		Explanation of each stitch with step-by-step instructions and illustrations.		
3	3.2	Traditional Embroidery Techniques: Exploration of traditional embroidery techniques from different cultures and regions. Study of historical significance and cultural context behind traditional embroidery styles. Examination of key characteristics, motifs, and patterns in traditional embroidery.		CO4
	3.3	Counted Thread Embroidery and Applique Variations: Introduction to counted thread embroidery techniques such as cross-stitch, blackwork, and drawn thread work. Explanation of applique techniques and its variations. Exploration of two specific variations of counted thread embroidery and applique, chosen from a range of options such as stump work, (Raised,embossed, padded etc.)		CO4
	3.4	Aari Work and Smocking Variations: Overview of Aari work, a traditional Indian embroidery technique, including its history and cultural significance. Introduction to smocking, a decorative embroidery technique used for gathering fabric. Selection and exploration of two variations each in Aari work and smocking.		CO4
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	E. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**25**
	B. End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

REFERENCES

1. Cerier A.B. (2005) Start to Sew, Creative Publishing international Creative Publishing International, Chanhassen, Minnesota
2. Brown, P. (2003). The Encyclopedia of Embroidery Techniques: A Comprehensive Visual Guide to Traditional and Contemporary Techniques. United States: Sterling Publishing Company.
3. The Royal School of Needlework (2018). The Royal School of Needlework Book of Embroidery: A Guide to Essential Stitches, Techniques and Projects. United Kingdom: Search Press.
4. Naik, S. D. (1996). Traditional Embroideries of India. India: A.P.H. Publishing Corporation.
5. Brijbhushan, J. (n.d.). Indian Embroidery. India: Publications Division Ministry of Information & Broadcasting.

SUGGESTED READINGS

1. https://www.bharatskills.gov.in/Home/StudyMaterial?var=vTpAb6LwzasV6zn4X5EZrg==&Default=No
2. Singh, S. (2023). Traditional Indian Textiles. (n.p.): LWRN Studio.
3. Bumpkin, C. (2015). A-Z of Smocking: A Complete Manual for the Beginner Through to the Advanced Smocker. United Kingdom: Search Press.
4. Singh, D.J. and Davidson, J. (2016). Learning Decorative Stitches: The Art of Shirring and Smocking. (n.p.): Mendon Cottage Books.

	Mahatma Gandhi University **Kottayam**
Programme	
Course Name	**Bakery Skills**
Type of Course	**SEC**
Course Code	**MG5SECHSC301**
Course Level	**300 – 399**
Course Summary	The students are imparted theoretical and practical knowledge of preparing bakery related products; knowledge of the ingredients used and undertakes the costing part of it. Students also apply knowledge in hygiene and faults and remedial measures, major and minor equipment used, setting up of a bakery unit making this course a lucrative field of study.

Semester	**V**	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	45
Pre-requisites, if any						

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Describe the basic principles of baking	K	PO1
2	Compare bakery ingredients and its effect on sensory parameters of baked foods.	U	PO 2
3	Develop different methods of bread, biscuit and cake manufacture	A	PO 2
4	Conduct sensory evaluation of bakery products	A	PO 10
5	Understand the layout of a bakery production unit.	U	PO 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Principles of Baking and Bakery Ingredients			**15**	
1	1.1	Basic Baking Principles. Mixing and Gluten development. Processes that occur during mixing; Controlling gluten development; Methods for adjusting gluten development; The baking process.	7	CO 1
	1.2	Wheat flour, Wheat varieties, Composition of wheat Flour, Grades. Sugars, Types, Syrups. Milk and milk products, Eggs, Leavening agents-yeast, chemical leaveners. Food Additives used in Baking - Gelling agents; Fruits and Nuts, Chocolate and Cocoa, Salt, Spices and Flavorings.	8	CO 2
Principles of Bread, Biscuit and Cake manufacturing				
2	2.1	Role of baking ingredients in improving the quality of bread.	**15**	CO 3
	2.2	Types of yeast, fermentation of dough. Leavening agents, types of leavenings. Bread improvers. Fillings and toppings.		CO 3
	2.3	Characteristics of flour used for making bread, biscuits and cakes.		CO 3
	2.4	Methods of mixing the ingredients, dough development methods - straight dough, sponge dough.		CO 3
	2.5	Moulding, proofing, baking, packing.		CO 3
	2.6	Spoilage and bread staling, methods to reduce bread staling and spoilage.		CO 3
	2.7	Processing of biscuits and cakes- Ingredients, development of batter, baking and packing. Spoilage in cakes and biscuits. Basic faults in Bread , Biscuit and Cake Baking.		CO 3

Sensory Evaluation – Procedure				
3	3.1	Appearance, Taste, Flavour, Texture & Consistency (Firm & Close, short & crumbly, spongy, light & even, flaky, coarse, tough, hard, roping, pouring, soft peak, medium peak, stiff peak). Prepare sensory evaluation proforma.	**15**	CO 4
	Related experience	Preparation of Various types of Breads, Cookies and Cakes		CO 5
		Visit to a production unit of a bakery		CO 5
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**25**
	B. End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

REFERENCES

i) Srilakshmi, B. (2017) Nutrition Science, New Age International (P) Ltd., New Delhi.

ii) Sunetra Roday (2017). Food Science and Nutrition, Oxford University Press, New Delhi.

SUGGESTED READING

1. Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012) Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.

2. Satyanarayana, U. and Chakrapani, U.(2018)Biochemistry.7th edition. Elsivier/ Books and Allied.

	Mahatma Gandhi University **Kottayam**					
Programme						
Course Name	**Event Management**					
Type of Course	**SEC**					
Course Code	**MG5SECHSC302**					
Course Level	**300-399**					
Course Summary	This course structure provides a holistic view of event management, incorporating theoretical knowledge, practical skills, and real-world examples.					
Semester	V	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	**45**
Pre-requisites, if any	A basic understanding of events, strong communication and technology skills, critical thinking abilities, teamwork experience, marketing awareness, budgeting knowledge, environmental and social awareness, creative thinking, and an interest in analyzing case studies of successful events.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Define the historical context, evolution, and scope of the event management industry.	K	1,4
2	Differentiate between various types of events, analyzing their unique characteristics and requirements.	An	1,2

3	Explain the key responsibilities and skills required for effective event management, citing case studies of successful event managers.	A	2,10
4	Develop a comprehensive event plan that includes specific objectives, target audience definition, and a detailed budget.	C	2,4,7,8
5	Formulate effective marketing strategies for events, utilizing both traditional and digital marketing techniques.	A	4,5,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction and Overview of Event Management				
1	1.1	Definition, importance, and scope of event management.	**15**	CO1
	1.2	Types of Events-Corporate events, social events, cultural events, sports events, etc. Understanding the unique characteristics of each type.		CO1
	1.3	Emerging Trends in Event Management -Virtual and hybrid events.		CO1
	1.4	Incorporating the latest technologies.		
	1.5	Role and Skills of an Event Manager-Key responsibilities and skills required.		
	1.6	Case studies of successful event managers.		
	1.7	Case Studies of Successful Events.		
Art of Event Management: Concept				
	2.1	Planning - Defining Objectives, Identifying Target Audience, and Budgeting for the Event , Developing a Comprehensive Event Plan	**15**	
	2.2	Event Design and Theme Development,The Significance of Design in Events, Strategies for Creating a Cohesive Theme.		

	2.3	Venue Selection and Logistics Criteria for Choosing Suitable Venues, Managing Logistics, Permits, and Legal Considerations	15	
	2.4	Sustainable Event Management-Incorporating Sustainable Practices, Considerations for Green Event Certifications		
	2.5	Marketing and Promotion -Utilizing Traditional and Digital Marketing Techniques ,Social Media, Email Campaigns, and Partnerships		
	2.6	Sponsorship and Fundraising , Attracting Sponsors and Partners , Effective Budget Management and Fundraising Strategies		
Art of Event Management -Execution				
	3.1	Execution Phase-Building and Leading a Successful Event Team. Delegating Tasks and Ensuring Effective On-Site Management		
	3.2	Technology in Event Management - Incorporating Event Management Software Utilizing Technology for Registration, Ticketing, and Communication		
	3.3	Post-Event Evaluation ,Identifying Key Performance Indicators (KPIs) for Events, Gathering and Analyzing Feedback		
	3.4	Post-Event Reporting - Creating Comprehensive Post-Event Reports , Documenting Successes and Areas for Improvement		
	3.5	Final Project Presentation - Students Showcase Their Event Plans or Analyses, Receiving Feedback from Peers and Instructors		
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**25**
	B. End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

REFERENCES

1. Shone, A. & Parry, B. (2004). Successful event management: a practical handbook. London: Cengage Learning EMEA
2. Lyons, T. (2012). Social entrepreneurship: how businesses can transform society. USA: ABC-CLIO.
3. Allen, J. (2009). The executive's guide to corporate events and business entertaining. USA: John Wiley & Sons.
4. Naylor, S. (2011). The smart guide to wedding weekend events. USA: SCB Distributors.
5. Bowdin,G. Allen, J. Harris,R. McDonnell,I. & O'Toole, W. (2012). Events management. (3rd ed.). UK: Routledge.

SUGGESTED READING

1. "The Art of Event Planning: Pro Tips from an Industry Insider" by Judy Allen.
2. "Into the Heart of Meetings: Basic Principles of Meeting Design" by Eric de Groot and Mike van der Vijver.
3. "Event Planning: The Ultimate Guide to Successful Meetings, Corporate Events, Fundraising Galas, Conferences, Conventions, Incentives, and Other Special Events" by Judy Allen.
4. "Sustainable Event Management: A Practical Guide" by Meegan Jones.
5. "The 5 Second Rule: Transform your Life, Work, and Confidence with Everyday Courage" by Mel Robbins.

SEMESTER-VI

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Fundamentals of Garment Construction**
Type of Course	**DSC**
Course Code	**MG6DSCHSC300**
Course Level	**300-399**
Course Summary	This comprehensive course is designed to equip students with an in-depth understanding and practical proficiency in the various facets of apparel pattern making and design.

Semester	VI	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	45+30=75
Pre-requisites, if any	Prior knowledge of garment construction concepts to facilitate effective comprehension and application of advanced pattern making.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe the sewing machine components and troubleshooting problems and other sewing tools	U	1, 2, 9, 10
2	Discuss the application of different trimmings and decorations	A	1, 2, 3, 10
3	Understand the techniques of taking accurate body measurements for different pattern making processes and pattern alteration	U	1, 2, 8, 10
4	Explain the process of preparing fabric for cutting	U	1, 2, 10
5	Develop samples for seams, fullness, neck finishes and fasteners and construct garments suitable for babies	C	1, 2, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Sewing Tools and Trims				
1	1.1	Parts of Sewing Machine and their functions, Minor troubles in machine and their causes.	**17**	CO1
	1.2	Cutting Tools, Hand sewing and embroidery tools, Measuring tools, Marking tools, General tools, Pressing tools		CO1
	1.3	Soft trims: Lace, Rickrack, Fringes, Tassels, Rope or cord, Bias trimmings, Twill tapes, Braids. Hard trims: Fancy buttons, Beads, Sequins Decorations: Motifs, patch work, quilting, pompous, Applique Smocking, mirror work, ribbon work, crochet, macramé and tatting		CO2
Pattern making, Grading and Pattern Alterations				
2	2.1	Body Measurements – Preparation for measuring, Method of taking body measurements of ladies and children	**18**	CO3
	2.2	Pattern - definition. Methods of pattern Making- Drafting, Draping and Flat pattern methods. Advantages and disadvantages Drafting-Principles of drafting. Commercial patterns- advantages and disadvantages. Pattern grading.		CO3
	2.3	Pattern alteration- Standards for a good fit: Ease, Line, Grain, Set, Balance		CO3
	2.4	Principles of patten alteration, Fitting techniques		CO3
Fabric preparation and cutting				
3	3.1	Preparation of fabric for cutting: Straightening fabric ends, Straightening fabric grain and shrinking fabrics	**10**	CO4
	3.2	Importance of grain in fabric cutting, Marking, Pattern layout, Cutting.		CO4

Practical				
4	4.1	Seams: Plain seam, Single Top stitch, Double top stitch, French seam, Flat fell seam, Piped Seam Seam finishes: Double stitch finish, Pinked finish	30	CO5
	4.2	Fullness: Darts – Single pointed dart, Double pointed dart Tucks- Pin tucks, Crossed tucks Pleats – Knife pleat, Box pleat, Inverted box pleat Gathers- Gathering by hand, Gathering by machine and Gathering by elastic.		CO5
	4.3	Neck finishes – joining bias, bias binding, bias facing, fitted facing Fasteners- Hook and eye, press buttons		CO5
	4.4	Drafting and construction of a frock with panties for a six-month-old girl baby		CO5
	4.5	Drafting and construction of a romper for a six-month-old boy baby		CO5
	Teacher specific content (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Mary Mathews, "Practical Clothing Construction Part I & II", Paprinpack, Chennai, 2000.
2. Joseph-Armstrong, H. (2013). Patternmaking for Fashion Design. India: Pearson.
3. Stringer, P. C. (1992). Pattern Drafting for Dressmaking. United Kingdom: B.T. Batsford.
4. Amaden-Crawford, C. (2018). The Art of Fashion Draping. United Kingdom: Bloomsbury Publishing.
5. Amaden-Crawford, C. (2007). Patternmaking Made Easy. United States: Amaden-Crawford, Incorporated.

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1. Erwin, M. D., Kinchen, L. A., Peters, K. A. (1979). Clothing for Moderns. United Kingdom: Macmillan.
2. Sharada Devi, A and Anitha, D. (2009) Fashion and Apparel Designing. State Institute of Vocational Education, Directorate of Intermediate Education, A.P.

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Nutrition Through Lifecycle**					
Type of Course	**DSC**					
Course Code	**MG6DSCHSC301**					
Course Level	**300 - 399**					
Course Summary	Course investigates how nutrition requirements and challenges change throughout the human lifecycle and how alteration in nutritional requirements impact on human health.					
Semester	VI	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-		60
Pre-requisites, if any	Nil					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the completion of the course the student could be able to :			
1	Summaries the basic concepts of RDA and EAR	U	PO 1
2	Differentiate the nutritional needs and recommendations during adulthood and old age.	An	PO 1
3	Evaluate the adequacy of diets and nutritional requirements during pregnancy and lactation	E	PO 2
4	Analyse the nutritional adequacy and growth of infants.	An	PO 1
5	Categorize the dietary modifications and nutritional requirements during Childhood and Adolescence.	An	PO 2
6	Design food plans and assess the adequacy of diets to meet the nutritional needs of humans at various stages of life cycle.	C	PO 2
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Concepts of RDA & EAR, Nutrition for Adults and Elderly				
1	1.1	Basic concept and purposes of Recommending the Dietary Allowances and Estimated Average requirements (EAR).	5	CO 1
	1.2	Factors Affecting Recommended Dietary Allowances. Dietary guidelines for Indians. Uses of ICMR- RDA in planning balanced diet.		CO 1
	1.3	Reference Man and Reference Woman, Food and Nutritional Requirements for Adults, Dietary modifications for adults.		CO 2
	1.4	Physiological changes during old age. Nutritional Requirements of Elderly		CO 2
	1.5	Nutrition related Problems of Old Age, Dietary modifications for elderly.		CO 2
Nutrition in Pregnancy and Lactation				
2	2.1	Physiology of pregnancy, Nutritional requirements during pregnancy.		CO 3
	2.2	Dietary considerations, Nutritional Problems and Complications.		CO 3
	2.3	Physiology and hormonal control of Lactation. Nutritional Requirements during lactation		CO 3
Nutrition in Infancy, childhood and Adolescence				
3	3.1	Developmental milestones in Infancy.	15	CO 4
	3.2	Composition of Human Milk and Human Milk Substitutes Advantages of breast feeding, Bottle Feeding and related Problems.		CO 4
	3.3	Weaning and Supplementary Feeding		CO 4
	3.4	Use of growth charts and standards		CO 4

	3.5	Growth and Development of Pre School, School Going Children and Adolescence	**15**	CO 5
	3.6	Food and Nutritional Requirements.		CO 5
	3.7	Factors to be considered while Planning Diet for Children and Adolescents,		CO 5
	3.8	Nutritional problems and Eating Disorders.		CO 5
Practical				
4	4.1	Nutrient Requirements Analysis: Students will analyze dietary guidelines and nutrient requirements for different life stages (infancy, childhood, adolescence, adulthood, and elderly). They will compare and contrast nutrient needs at various life stages and identify specific nutrients of concern during each stage.	**30**	CO 4
	4.2	Field Trip to Community Programs or Healthcare Facilities: Students will visit community programs or healthcare facilities that focus on nutrition interventions for specific age groups.		CO 3
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B. End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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	Mahatma Gandhi University, Kottayam
Programme	**BSc (Hons) Home Science**
Course Name	**Designing Interior Spaces**
Type of Course	**DSE**
Course Code	**MG6DSEHSC300**
Course Level	**300-399**
Course Summary	The course serves as a foundation for students to grasp the fundamental principles of creating interior spaces that foster health, safety, and satisfaction. It focuses on both functional and aesthetic design aspects, empowering students to transform interiors into inviting and comfortable living environments. Through hands-on activities, students engage in experiential learning, gaining insights into space planning, furniture design, and finishes. This practical approach enables them to skilfully organize residential spaces and elevate them aesthetically, aligning furniture and finishes with chosen themes and styles.

Semester	VI	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	45+30=75
Pre-requisites, if any	Prior familiarity with design principles and elements is beneficial for students undertaking this course, providing a foundational understanding that enriches their study of interior design in order to transact the skill acquired to appropriate furniture, furnishings and accessories for interior use.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
After the completion of the course the student could be able to :			
1	Describe the concept and objectives of Interior design from the perspective of a client.	U	1, 4
2	Appraise the requirements and recommend suitable furniture, furnishings, home lighting and accessories in home interiors.	Ap	2, 7
3	Analyse and develop interior designs based on space availability and ergonomics.	An	1, 2
4	Design trendy, eco-friendly and functional home interiors with appropriate furniture, furnishing, lighting and colour schemes for interior spaces.	C	3, 6
5	Learn to use an appropriate space saving techniques for maximum space utilization in each room.	A	4, 7
6	Identify basic house plans and interior designs based on client requirements and judiciously recommend various finishing materials and fittings available in the market	E	2, 7, 6
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
1.	**Overview of Interior Space Design**			
	1.1	Concept and goals of Interior Design- Aesthetics, Functionalism and Expressiveness. Context of Space in interior design, Objectives of space planning- Biological needs, environmental concerns, cultural influences, psychological effects, utility, economy, beauty and character.	15	CO1 CO2
	1.2	Factors influencing the planning of interiors: People, lifestyle, Location, Orientation, Grouping, Lighting and Ventilation, Circulation, Spaciousness, Privacy, Flexibility, Services, Aesthetics, Economy and Cost.		CO2

	1.3	Importance and significance of Ergonomics in Space planning, Environmental factors in ergonomic designing- Thermal Comfort, Lighting, Colour, Noise etc.		CO3
	1.4	Human measurements (Anthropometric data) required for space planning. Design consideration for Persons with special needs- PWD (People with disabilities), children, aged etc.		CO4
2	2.1	Housing for Family: Functions of a house; Principles of house planning. Introduction to Vaastu. Reading and understanding House plans – Symbols used in drafting plans, Types of plans – floor plan, elevation, sections.	15	CO
	2.2	Building Components– Foundation, Wall, Floor, Ceiling, Roof, Structural openings- door, window, etc., stairs, ramps etc.		CO6
	2.3	Materials for interior use - wall finishes, floor finishes. Essential services in Interiors: Plumbing and Sanitary fittings, Electrical fittings etc.		CO6
	2.4	Residence designs for various lifestyles, Contemporary house design trends.		CO6
3	3.1	Designing Life Spaces: Interior Space Organisation- Classification of Activity zones – Group (Public) Space, Personal (Private) Space, Support spaces and Support systems.	15	CO3
	3.2	Interior layouts of various rooms of a residence- Living, Dining, Bedrooms, Toilet/ Bath, Kitchen, Utility - with finishes, furniture, storage, furnishings, accessories, lighting and colour.		CO3
	3.3	Improving Functionality in Interiors- Space saving techniques such as Multi- use Rooms and Furniture, In-built, knock down furniture, One room apartment (Studio), Illusions for apparent Space creation.		CO5
	3.4	Current Trends in Interior Design, Study of traditional and Modern interior design and decorations, Interior Design as a career option. Design Communication Techniques: Introduction to Design Software.		CO3

Practical / Related Experience in Design Development and Drawing				
4	4.1	Ergonomics- Learn to take Human measurements (anthropometric data) required for space planning.	30	CO6
	4.2	Exercises in Space planning and organization- Draw the layout with furniture arrangement of : (Any 1 room) 1. Bed room/ 2. Dining Room/ 3. Drawing room 4. Kids room /5. A Multi use room		CO6
	4.3	Design a multi purpose furniture or storage unit for a room: 1. Kitchen/ 2. Bed room / 3. Drawing room / 4. Dining room / 5. kids room (Any 1)		CO5
	4.4	Design and draft ergonomic kitchen in different layouts with optimum working heights and work triangle: 1. U-Shaped/ 2.L-shaped/ 3. Two wall or corridor Kitchen/ 4. One wall / 5.Galley Kitchen/ 6. Island Kitchen/ 7. Peninsular Kitchen (Any 1)		CO4
	4.5	Design a personal life space for you with furniture, furnishings and accessories. Justify the Design		CO4
	4.6	Collection and documentation/ Case Study and Presentation (Any 1) -Figures and photographs of commendable interior works of designers. -Ancient Furniture, Furnishing, Accessories etc.		CO6
	4.7	Industry / Shop / Organisation Visit/ Market Study for familiarizing with :- (Any 1) ● Design materials and techniques ● Plumbing Fixtures ● Electrical Fixtures ● Finishing materials		CO6
5	**Teacher specific content** (This content will be evaluated internally)			
	Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**NGO Management**
Type of Course	**DSE**
Course Code	**MG6DSEHSC301**
Course Level	**300-399**
Course Summary	This course provides an in-depth understanding of the principles and practices involved in managing non-governmental organizations (NGOs). Participants will explore key aspects such as strategic planning, fundraising, project management, and stakeholder engagement.

Semester	VI	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	**45+30=75**
Pre-requisites, if any	Basic knowledge regarding NGO					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand and apply concepts such as governance, legal compliance, and strategic planning to effectively manage an NGO.	U	1
2	Develop and implement fundraising strategies to ensure financial sustainability for NGO activities.	C	2,3
3	Apply project management principles in the context of NGO projects, fostering skills in defining, planning, and advocating for social change.	A	1,2,5

4	Create and implement a communication strategy for effective stakeholder engagement, ensuring transparency and promoting the NGO's mission.	C	2,5
5	Analyze successful advocacy campaigns through case studies, learning valuable insights for impactful social change.	An	4,2
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Understanding of NGO Landscape				
1	1.1	Define the concept and role of NGOs.	**15**	CO1
	1.2	Identify different types of NGOs and their functions.		CO1
	1.3	Explain the historical and global context of NGOs.		CO1
Strategic Planning for NGOs				
2	2.1	Develop a mission and vision statement for an NGO.	15	CO2
	2.2	Formulate SMART objectives.		CO2
	2.3	Create a basic strategic plan for an NGO.		CO2
Governance and Legal Compliance, Fundraising				
3	3.1	Understand the legal framework for NGOs.	**15**	CO1
	3.2	Explain the role of governance in NGO management.		CO1
	3.3	Develop an awareness of ethical considerations in NGO operations.		CO3
	3.4	Identify various sources of funding for NGOs.		CO1
	3.5	Develop a fundraising strategy.		CO3
	3.6	Understand financial management and budgeting for NGOs. CSR FUNDS (Corporate social responsibilities)		CO1

Practical-/Project Management in NGO				
4	4.1	Define and plan NGO projects. Understand project life cycles. Develop basic monitoring and evaluation frameworks.	30	CO1
	4.2	Apply project management principles to real-life scenarios. Activity: Provide students with a project scenario related to an NGO's activities. Ask them to create a project plan, identify potential risks, and develop a monitoring and evaluation framework. This can be followed by a discussion on the challenges faced during the simulation.		CO3
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)
ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)
iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i. Laboratory Evaluation (25 marks)
ii. Record (10 marks)

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1. Development Communication: Reframing the Role of the Media" by Thomas L. Mc Phail
2. "Communication for Development and Social Change" by Jan Servaes
3. "Theories of Development Communication" by Srinivas R. Melkote and H. Leslie Steeves

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Developmental Psychology (Specialization-Human Development)**
Type of Course	**DSE**
Course Code	**MG6DSEHSC302**
Course Level	**300-399**
Course Summary	This course explores the fundamental elements that shape human behaviour from psychological perspectives. Students will gain an understanding of key concepts and theories related to various aspects of human behaviour.

Semester	VI	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Prerequisites for the course typically include basic knowledge in biology and psychology.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
CO1	Analyse how sensory information shapes human experience and behaviour.	An	1, 2, 4, 10
CO2	Determine the cognitive skills, including various thinking approaches, reasoning abilities, and effective problem-solving techniques.	E	1, 2, 4, 10
CO3	Evaluate the process of memory and forgetting and the effectiveness of different memory training methods.	E	1, 2, 4, 10
CO4	Assess the theoretical insights, nature, types, and the factors that shape the learning process.	E	1, 3, 4, 6, 10

CO5	Compare the various theories of intelligence and intelligence tests.	An	1, 2, 4, 10
CO6	Develop practical skills to apply psychological principles to real-world scenarios.	S	1, 2, 4, 5, 6, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Sensation, Perception and Attention				
	1.1	Sensation - Definition, Sensory organs and receptors, Types of sensation – Visual, Auditory, Tactile, Gustatory and olfactory.	15	CO1
	1.2	Perception – Definition, Perceptual organization and perceptual constancies, Illusion. Sensory adaptation and its role in perception.		CO1
	1.3	Attention – Definition, Types, Factors of attention, Span of attention		CO1
	1.4	Experience different types of sensations. For example, visual illusions, sound illusions, and tactile experiences and prepare a report.		CO1
	1.5	Illustrate a few perceptual illusions and write a brief report on illusions.		CO1
	1.6	Conduct an attention span experiment and discuss factors that affect attention.		CO1
Thinking, Reasoning and Problem solving				
2	2.1	Thinking – Definition, Elements or tools of thinking, Types of thinking: concrete thinking, abstract thinking, reflective thinking, creative thinking, critical thinking and associative thinking.	**15**	CO2
	2.2	Reasoning - Meaning, Definition, Types: inductive and deductive.		CO2

	2.3	Problem solving: definition and steps.		CO2
Memory and Forgetting				
3	3.1	Memory - Meaning, Types: Sensory, Short-term and Long-term memory Training in memory, mnemonics.	**15**	CO3
	3.2	Forgetting – Definition, Types, Factors influencing forgetting		CO3
	3.3	Ebbinghaus's curve of forgetting		CO3
	3.4	Practice memory enhancement techniques such as mnemonic devices and share the experiences in groups.		CO3
	Learning, Motivation and Intelligence			
4	4.1	Concept of learning, Nature of learning, Types of learning, Factors affecting learning	**15**	CO4
	4.2	Motivation- Definition, Types, Maslow's Hierarchy of Needs, Factors Affecting Motivation		CO4
	4.3	Select suitable intelligence tests and administer to a class of adolescents, score and evaluate.		CO4
	4.4	Select suitable intelligence tests and administer to a class of adolescents, score and evaluate.		CO4
5	5	Teacher Specific Content The content will be evaluated internally		

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Traditional Textiles and Costumes of India (Specialization-Food Nutrition and Dietetics)**					
Type of Course	**DSE**					
Course Code	**MG6DSEHSC303**					
Course Level	**300-399**					
Course Summary	This course delves into the diverse and intricate world of historical costumes in North, Central, and South India, focusing on the unique attire of various regions. Students will embark on a fascinating journey through the traditional clothing of Indian states, gaining insights into the cultural and historical significance of each attire.					
Semester	VI	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Basic knowledge of Indian history and cultural variation will facilitate the understanding of the course.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Analyze the male and female costumes of Northern Indian states	An	1, 3, 6, 10
2	Develop a comprehensive knowledge of the regional male and female costumes of Central and Southern Indian states	U	1, 3, 7, 10
3	Develop an understanding of the cultural contexts and regional variations of resist dyed textiles	U	1, 3, 7, 10
4	Evaluate the aesthetic and artistic elements embedded in various traditional printed textiles	E	1, 3, 4, 10
5	Recognizing hand-woven textiles, including saris and shawls, from different regions of India	An	1, 3, 9, 10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Historical costumes of north India				
1	1.1	Study of regional male and female costumes of Indian states: Northern- Jammu and Kashmir, Punjab, Himachal Pradesh,	**12**	CO1
	1.2	Western - Gujarat, Rajasthan		CO1
	1.3	Eastern-Nagaland, Manipur, Meghalaya, Sikkim, West Bengal		CO1
Historical costumes of central and south India				
2	2.1	Study of regional male and female costumes of Indian states: Central- Maharashtra, Madhya Pradesh	**12**	CO2
	2.2	Southern-Andhra Pradesh, Tamil Nadu, Karnataka, Kerala		CO2
Traditional resist dyed and printed textiles				
3	3.2	Bandhani of Gujarat Bandhej & Lehariya of Rajasthan	**20**	CO3
	3.3	Patola of Gujarat, Bandhas of Odisha, Ikat Textiles of Andhra Pradesh- Telia Rumal, Pochampalli Ikats		CO3
	3.4	Bagru prints from Rajasthan, Sanganeri prints from Rajasthan, Kalamkari from Andhra Pradesh, Madhubani Painting, Calico prints of Samba		CO4
Traditional hand-woven textiles				
4	4.1	Saris- Banaras Brocades, Baluchari Saris,Buttedar, Dacca Muslins, Jamdani Saris, Paithani Saris, Pitamber, Kanjeevaram Saris, Chanderi Saris, Maheshwari Saris, Himrus and Amrus	**16**	CO5
	4.2	Shawls- Kashmir Shawls, Kullu & Kinnaur Shawls, Wraps of North-east		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Child Health and Nutrition (Specialization-Food Nutrition and Dietetics)**
Type of Course	**DSE**
Course Code	**MG6DSEHSC304**
Course Level	**300 - 399**
Course Summary	This course on Child Health and Nutrition provides a comprehensive understanding of the physical, mental and nutritional aspects crucial for children's well-being. It covers growth and developmental stages, emphasizing the vital role of nutrition in shaping a child's health trajectory. Students learn about essential nutrients, their sources and the impact on cognitive and physical development. The curriculum delves into preventative strategies for common childhood health issues, considering the influence of socio-economic and cultural factors. Through a combination of theoretical knowledge and practical skills, participants are equipped to foster a nurturing environment that supports optimal child health and nutrition.

Semester	VI	Credits		4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others
		3	-	1	-	45+ 30=75
Pre-requisites, if any	Basic understanding of nutrition and child development is recommended for this course on Child Health and Nutrition, covering growth stages, essential nutrients, preventative strategies, and socio-economic influences on child well-being.				

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the completion of the course the student could be able to :			
1	Analyse the developmental phases of the child, the physical and physiological changes involved.	An	1, 6,10
2	Understand the nutritional requirements of the mother and child in relation to their growth and development	U	6,7,10
3	Learn to make dietary modifications to be made to meet the nutritional demands of the child.	U	3,5, 10
4	Analyse the nutritional and feeding concerns in the child at each stage of development	An	1,4,9,10
5	Apply suitable direct and indirect methods of nutritional assessment for the developmental phases and compare with appropriate standards for growth monitoring.	A	1,4, 8,10
6	Create nutritional awareness tools and conducting Education sessions	C	1,4,10
Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Nutrition in Pregnancy and Lactation				
1	1.1	Importance of Nutrition prior to and during Pregnancy, Pre requisites for successful outcome, Effect of under nutrition on mother-child dyad - Short term and long term.	**20**	CO 1
	1.2	Physiology and endocrinology of Pregnancy. Pregnancy weight gain.		CO 1
	1.3	Nutritional requirements during Pregnancy, Iron and Folic acid supplementation, Diet plan for a pregnant mother. Immunization during Pregnancy.		CO 1

	1.4	Adolescent Pregnancy, Intra Uterine Growth Retardation (IUGR), Congenital malformation, Foetal alcohol syndrome, Gestational Diabetes Mellitus. Common problems encountered in pregnancy.		CO 1
	1.5	Physiology and endocrinology of lactation-Synthesis of milk, let down reflex, role of hormones, lactational amenorrhea		CO 2
	1.6	Human milk composition. Value of colostrum. Advantages of Breast Feeding		CO 2
	1.7	Nutritional requirements of lactation. Diet plan for a lactating mother		CO 2
Infant and Young Child Feeding				
2	2.1	IYCF guidelines, Exclusive breastfeeding and Baby Friendly Hospital Initiative- Steps and Policies, Common problems during breastfeeding.	**10**	CO 3
	2.2	Operational guidelines for breast feeding. Artificial feeding-Adverse effects. Feeding of low birth weight and preterm babies.		CO 3
	2.3	Complementary feeding, Feeding related Problems. HIV and Infant Feeding. Concept and need of Human milk bank in India.		CO 3
	2.4	Infant Feeding in Maternal illness. Growth monitoring and Promotion.		CO 3
Nutrition in Childhood & Adolescence and Assessment of Nutritional Status				
3	3.1	Normal Pattern of Growth and Development, Standards for Growth in children		CO 4
	3.2	Nutritional requirements of children and adolescents		CO 4

	3.3	Nutritional concerns- Vitamin A deficiency, Iron Deficiency Anemia, PEM, Obesity.	**15**	CO 4
	3.4	Direct Assessment of Nutritional Status. Anthropometry- Length and height, Weight, BMI, Z scores and percentiles, MUAC		CO 5
	3.5	Biochemical assessment, Clinical and Dietary Assessment. Indirect measures of Nutritional status.		CO 5
Practical				
4	4.1	Prepare a portfolio for key nutritional concepts for children	**30**	CO 6
	4.2	Creating balanced meal plans for Pregnant and lactating mother, preschoolers		CO 6
	4.3	Revise traditional weaning recipes and modernize them for contemporary preferences		CO 6
	4.4	Make a PPT on Healthy food choices and conduct awareness class for preschoolers.		CO 6
	4.5	Identification and prevention of common health problems in children		CO 6
	4.6	Case studies on managing childhood illnesses through nutrition (At least 2)		CO 6
	4.7	Conducting nutritional assessments for children		CO 6
	4.8	Interpretation of growth charts and nutritional indicators		CO 6
	4.9	Group projects on community-based nutrition initiatives		CO 6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

MGU-UGP (HONOURS)

Syllabus

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	B. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	C. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)
ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)
iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Clothing Care**					
Type of Course	**SEC**					
Course Code	**MG6SECHSC300**					
Course Level	**300-399**					
Course Summary	This comprehensive course covers a wide range of topics related to laundry science and techniques, providing essential knowledge for anyone interested in understanding the principles behind effective fabric care and maintenance.					
Semester	VI	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	**45**
Pre-requisites, if any	Students should have knowledge about the basic concepts of textile materials used in clothing.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the completion of the course the student could be able to:			
1	Explain the process of determination and removal of water hardness	K	1, 2, 10
2	Comprehend the manufacturing process and actions of surfactants	U	1, 2, 6
3	Analyse the application of laundry agents	A	1, 6, 7
4	Explain the processes of washing, dry cleaning and stain removal	U	1, 4, 7
5	Evaluate the care labels used in clothing materials	E	1,3, 4, 10
Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Water and Surfactants				
1	1.1	Water- hard and soft water, determination of water hardness, methods of softening water. Zeolite or base exchange. Surfactants- Soaps and Detergents	**15**	CO1
	1.2	Laundry soaps – Manufacture of soap (Hot process, cold process), composition of soap, types of soap, chemical action		CO2
	1.3	Soap less detergents-detergent manufacture, advantages of detergents, Difference between soap & detergents.		CO2
Laundry Agents				
2	2.1	Stiffening Agents – Starch (cold water and hot water, Other stiffening agents, preparation of starch.	**15**	CO3
	2.2	Bleaching agents-Types of Bleaching agents-oxidising and reducing agents		CO3
	2.3	Laundry blues, types and their application		CO3
Laundering Processes and Care Labels				
3	3.1	Principles of washing- suction washing, washing by kneading and squeezing , washing by machine. Dry cleaning – definition, using absorbents, using grease solvents.	**15**	CO4
	3.2	Stain removal food stains, lead pencil, lipstick, mildew, nose drops, paint ,perfume, perspiration / mildew, tar, turmeric and kum-kum, general rules & ways of stain removal.		CO4
	3.3	Care labels – washing, bleaching, Drying, ironing and different placements of label in garments.		CO5
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Creative Applied Arts**					
Type of Course	**SEC**					
Course Code	**MG6SECHSC301**					
Course Level	**300-399**					
Course Summary	Make students familiar to the discipline of Applied Arts through hands-on experience to divert young minds from too much of academics to lighter enjoyable exercises. It would prove an attempt to initiate in them an opportunity to develop and kindle their senses in fine and applied arts, a viable avenue for lifelong learning.					
Semester	**VI**	**Credits**			**3**	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-		**45**
Pre-requisites, if any	Aptitude towards sketching and drawing, Basic Knowledge in elements and principles of design, Strong observational, research and analytical skills. The ability to solve problems creatively and using initiative. The ability to take criticism constructively. Developing an open mindset to new inspirations and concepts.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the completion of the course the student could be able to:			
1	Appreciate aesthetics of arts and crafts & develop and practice nuances of creative arts	Ap	2
2	Inculcate ability to develop and implement new artistic ideas and skills through hands-on experience in applied arts.	C	1,4

3	Comprehend significance of art concepts as an integral component of man's living styles from bygone days	E	3
4	Customize/ optimize use of visual and applied arts, accessories and antiques for designing interiors and other aspects	E	2,7
5	Realize learning as an enjoyable stress free experience resulting in lifelong learning	An	6,10
6	Expand knowledge and equip skills and emerge as self employed freelancers	S	6,9
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to Visual Arts and Crafts for Design in Everyday life				
1	1.1	Meaning and philosophy of art; categories of art related to interior design and decoration: visual, plastic, decorative, applied arts	10	1
	1.2	Type of arts and designs - Visual and graphic art; Visual and graphic design		1
	1.3	Concept and Basics of design, Aesthetics and Creativity: significance in design development		1
	1.4	Colouring exercises using the Prang colour system. Blending of colours to observe the effect of colour on each other. Colour harmonies		2
Materials & Medium in the application of Art & Design				
2	2.1	Materials and their use in applied arts – Paper, Canvas, Cloth, Wood, Earthenware, Ceramics, Glass, Plastics and Metals - processing and use	20	2
	2.2	Basic drawing techniques, pencil drawing, charcoal drawing, Cartoon drawing, Portrait drawing, Doodling, Rendering etc. Painting- Water colour painting, painting with crayons/ Oil pastels, Oil painting, Glass painting, Fabric painting		2
	2.3	Different methods and techniques used in Drawings - Abstraction and stylization, perspective drawings, sketching, rendering, still- life, land-scape, anatomy, two and three dimensional, Ornamentation and fine tuning techniques		2

	2.4	2D Art and Crafts such as Madhupani, Kalamkari, Tanjore; Mural, Warli art, Gond art, Fresco art, Stenciling and Collage etc.		2,5
	2.5	3D art and craft forms: Sculptures,Pot/ Bottle art, Jewellery making/decoupage/ Macrame/ soft toy making/ Papier-mâché etc.		2,5
	2.6	Creation of innovative designs from trash- Creative upcycling of paper, cloth and other materials		2,5
	2.7	Study of Major Work of Artists- Foreign artists – Michelangelo, Leonardo da Vinci, Raphael Sanzio, Pablo Picasso, Vincent van Gogh, etc. Indian artists – Raja Ravi Varma, R.K. Laxman, M.F. Husain, Anjoli Ela Menon etc.		2, 4
Basics on the Application of Arts and Crafts for Functional/ Aesthetic Use in Interior Decoration				
3	3.1	Painting - Worli and Madhubani, Floor decorations – Kolam, Alpana, Rangoli, flower carpet, Rangoli. Accessories – Macrame, pottery, soft toys, terrarium & Paper Mache, Collection and display of antiques.	**15**	3,6,
	3.2	2D art such as Madhupani, Kalamkari, Tanjore; Mural, Warli art, Gond art, Fresco art and Collage		3,6
	3.3	3D art forms: Sculptures,Pot/bottle art Jewellery making/decoupage/ Macrame/ soft toy making/ Paper Mache. 3D printing Floor and wall decorations		3,6
	3.4	Creation of innovative designs from trash. Upcycling paper, cloth and other materials creatively		2
	3.5	Collection and analysis of paintings/ work of art of famous artists Evaluation of art forms Submission of a complete record on practical work and portfolio on specified topics		3,6
4	**Teacher specific content** (This content will be evaluated internally)			
	Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Women Entrepreneurship Development**					
Type of Course	**SEC**					
Course Code	**MG6SECHSC302**					
Course Level	**300-399**					
Course Summary	This course provides a comprehensive exploration of entrepreneurship and business development, covering key aspects essential for aspiring entrepreneurs.					
Semester	VI	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	**45**
Pre-requisites, if any	A foundational understanding of entrepreneurship and an interest in the field.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand the fundamentals of entrepreneurship and its role in economic development.	U	1,2
2	Identify ways to approach supportive Institutions and Banks for starting an enterprise	K	1,9
3	Recognize the challenges faced by women entrepreneurs in India.	K	1,4
4	Analyze financial statements, implement budgeting strategies, and identify diverse funding sources for entrepreneurial ventures.	A	1,2,3,

5	Develop a business idea, including conducting market analysis and customer segmentation.	C	5,6
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Foundations of Entrepreneurship and Women Entrepreneurship				
1	1.1	Definition, meaning, and scope of entrepreneurship.	**15**	CO1
	1.2	Entrepreneurial qualities, functions, and types, with a focus on women entrepreneurs. Forms of organization: sole proprietorship, partnership, joint-stock companies.		CO2
	1.3	Women in Entrepreneurship: Challenges and Opportunities- The role of women entrepreneurs in economic development.		CO3
Business Planning and Financial Management for women entrepreneurs				
2	2.1	Ideation process tailored for women entrepreneurs. Developing a business idea.	**15**	CO4
	2.2	Market Analysis and Customer Segmentation- Strategies for market analysis and customer segmentation from a women-centric perspective.		CO 4
	2.3	Crafting a Comprehensive Business Plan- Business planning specific to women-led enterprises.		CO 5
	2.4	Financial Management for Women Entrepreneurs: Financial statements, budgeting, funding sources, and financial planning from a gender-sensitive lens. Institutional support for women entrepreneurs at central and state levels. Central level- SSIB,NSIC, SIDO,KVIC, NIESBUD, NABARD(any three relevant institutional support) State, Level-DIC, SFC, SSIDC, SIDBI, SISI, ICICI (any three)		CO 4

Technology, Digital Literacy, and Networking for Women Entrepreneurs				
3	3.1	Leveraging digital marketing, establishing an online presence, and embracing e-commerce for women entrepreneurs.	**15**	CO1
	3.2	Establishing and sustaining small-scale enterprises with a focus on women's involvement.		CO4
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Techniques of Food Preservation**
Type of Course	**SEC**
Course Code	**MG6SECHSC303**
Course Level	**300 - 399**
Course Summary	This course helps us to understand what is possible in the world of food preservation; then understanding the factors that cause food to deteriorate. Course also helps to study the different ways foods can be preserved from chemical treatments, to changing the environmental conditions (temperature, moisture content, etc.) Food preservation is something that should be understood by anyone who handles food; whether for their own use, or on a commercial basis.

Semester	**VI**	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-		**45**
Pre-requisites, if any	Prior knowledge in basic food science and understanding of food safety principles is recommended for the course on Techniques of Food Preservation.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Understand the principles and methods of preservation	K	1,2, 5,6,9
2	Understand the stages of sugar cookery, quality of pectin and acidity in the development of preserved food products	U	1,2, 5,6,9
3	Understand to formulate food based products	S	1,2, 5,6,9
4	Explore the principles of preservation in fruits and vegetables based products.	An	1,2, 5,6,9
5	Acquire skills to prepare preserved products and develop new products with retention of quality.	S	1,2, 6,9
6	Evaluate food processing industries	E	1,2,3,4,5

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Concept of Food Preservation and Preparation of Dehydrated Products				
1	1.1	Importance of Food Preservation	15	CO 1
	1.2	Types of Food spoilage by Micro organisms and by Enzymes		CO 1
	1.3	Basic Principles of Food Preservation		CO 1
	1.4	Food preservatives- Use of Salt, Acid, Sugar, natural food preservatives and artificial preservatives		CO 1
	1.5	Starting a food preserving unit Product		CO 1
	1.6	Promotion strategies and marketing skills		CO 1
	1.7	Methods of drying &dehydration , different types of driers , freeze drying- lyophilisation , packing & storage		CO 2
	1.8	General tips with drying foods		CO 2
Preservation by Sugar, Chemicals, Salt and Advanced Preservation Technology				
2	2.1	Stages in Sugar Cookery	15	CO 2
	2.2	Sugar Concentrates – Principles of Gel Formation		CO 2
	2.3	Role of Pectin in Preserved foods		CO 2
	2.4	Evaluation of pH, Acidity and pectin quality		CO 2
	2.5	Preparation and Preservation of Fruit Juices, RTS		CO 3
	2.6	Pickling – Principles Involved and Types of Pickles		CO 3
	2.7	Chemical Preservatives – Definition, Role of Preservation		CO 3
	2.8	Permitted Preservatives, FSSAI guidelines		CO 4
	2.9	Meaning and needs of freezing foods Types of Freezing and managing freezers		CO 4
	2.10	Guidelines for types of frozen foods-Fruits, Vegetables, fish, meat and poultry		CO 4
	2.11	Smoking foods, Pasteurization and Sterilization Food Irradiation Vacuum Packing Canning and Bottling		CO 4
	2.12	Food Packaging Materials for preserved food products		CO 4
Related experience				
3	3.1	**Hands on Experience-** Demonstrate drying methods for the selected products -Rice/ Wheat Roots and Tubers/ Fruits/ Vegetables, Reconstitution of dried vegetables and Preparation of salted, dehydrated, preserves	**15**	CO 5
	3.2	**Product Evaluation** Preparation of Jam/ Jelly, Marmalades/ Sauce and Squash Preserves		CO 5

		Candied, Glazed, Crystallized Fruits, Toffee Preparation and Preservation of Fruit Juices Hands on experience: Blanching of fruits & Vegetables		
	3.3	**Industrial experience** Development of a preserved food product and labelling according to FSSAI norms. Visit to Food Industries		CO 6
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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2. Srivastava R.P. (2012),Fruit and vegetable preservation – Principles and Practices, International Book Distributing Co., (IBDC), New Delhi.

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Food Service Management**
Type of Course	**SEC**
Course Code	**MG6SECHSC304**
Course Level	**400 - 499**
Course Summary	The goal of the course "Food Service Management" is to provide students with a fundamental grasp of the many facets of managing a food service business, including hospital dietary food service. This raises awareness of the basic ideas and roles of management as well as the instruments available for streamlining tasks, making effective use of labour and time, and managing supplies and other resources. Students will have practical experience in all aspects of food service, from purchasing to serving, which will help them develop their managerial skills and pave the way for them to become confident entrepreneurs in the food service sector.

Semester	VI	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-		45
Pre-requisites, if any	Basics of menu planning					

COURSE OUTCOMES

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Identify different types of Food Service	U	1,2
2	Describe the characteristics of each type of menu and when they are typically used.	K	1,2
3	Explain the importance of effective purchasing in food service operations.	A	1,2,3
4	Critique the service provided in a hotel restaurant based on the chosen style of service.	E	3,4
5	Evaluate the appropriateness of different table settings arrangements in restaurants	An	3,4,9
6	Organize food service events	C	3,4,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Scope and objectives of food service management and Menu Planning				
1	1.1	Scope, objectives and advantages of food service management.	**15**	CO 1
	1.2	Commercial Food service management System – Hotels, Restaurants, fast food outlets, cafeterias, snack bars, kiosks, vending machines.		CO 1
	1.3	Noncommercial food management system – Hospitals, Nursing homes, Industrial canteens and child care centers.		CO 1
	1.4	Functions, Sequence of Courses, Factors affecting menu planning		CO 2
	1.5	Types of menu - Al a carte, table d'hote and combination,		CO 2
	1.6	Steps in Menu Planning, Design of Menu Card.		CO 2
	1.7	Quantity food preparation- Standardisation, Recipe adjustments and portion control, Cost and Quality control in food preparation. Food Laws		CO 3
Purchase & Food Service system				
2	2.1	Methods of purchase (formal and informal)	**10**	CO 3
	2.2	Identifying needs, Selection, Receiving, Storage types, Issuing		CO 3
	2.3	Delivery Systems (Centralised and Decentralised)		CO 3
	2.4	Type of food service systems (conventional, commissary, ready prepared, assembly),		CO 4
	2.5	Service Styles-(table, assisted, self, single point, specialised/in situ)		CO 4
Table Setting and Arrangement				
3	3.1	Indian and Western Styles of Table Setting	**20**	CO 5
	3.2	Table Appointments		CO 5
	3.3	Napkin folding styles, Flower arrangement, Table Etiquettes.		CO 5
	3.4	Prepare recipes and menus.		CO 6
	3.5	Demonstrate napkin folding and flower arrangement suitable for different styles		CO 6

	3.6	Organize and conduct a food sale Plan the menu, resources and execute production and sale and estimate profit or loss.		CO 6
	3.7	Visit to a commercial and a non-commercial food service institution.		CO 6
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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2. West, B.B and Wood, L. (1994), 'Introduction to Food Service', Macmillan Publishing Company, New York, 7th Edition.

3. June Payne-Palacio, and Monica Theis (2016), 'Foodservice Management: Principles and Practices', 13th Edition Pub. Harlow Pearson,

4. John B. Knight, Lendal H. Kotschevar (2017), 'Quantity: Food Production, Planning, and Management', 3rd Edition, John Wiley and Sons

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Communication for Development**					
Type of Course	**VAC**					
Course Code	**MG6VACHSC300**					
Course Level	**300-399**					
Course Summary	Upon completing the course, students are expected to possess the ability to analyze the pivotal role of communication in developmental processes, employ diverse approaches and methods in practical situations, and formulate effective strategies to address challenges in development through communication.					
Semester	VI	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	45
Pre-requisites, if any	Basic understanding of communication, familiarity with agriculture and education, and foundational knowledge in extension or related fields, with a background in interpersonal communication or related areas being beneficial.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Gain knowledge on the need and importance of communication and its significance in exchange of information	U	1,2
2	Analyze the models of Communication and role of media in societal development	An	3,5
3	Acquire knowledge on the effective communication and extension approaches.	U	3,7
4	Apply communication methods in the implementation of programme.	A	4,5,6
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction and Approaches to Development Communication				
1	1.1	Meaning, definition, nature, scope and importance of communication Functions of communication – information function, command or instructive function, influence or persuasive function and integrative function	**15**	CO1
	1.2	Elements of Communication – three elements – source, message, receiver, four elements – encoding, decoding, sender and receiver, five elements – communicator, communicate, message, channel and feedback		CO1
	1.3	Means of Communication – Oral, Written, Sign / signal, action, object Types of Communication – Formal and Informal Communication Pattern - one way, two way, circular		CO1
	1.4	Meaning, nature, role and characteristics of development communication		CO1
Communication Models				
	2.1	Importance of communication in extension Models of Communication-Aristotle Model, Shanon – Weaver Model, Berlo Model, Scharmm Model	15	CO2
	2.2	Concept, purposes and significance of model in communication		CO2
Effective Communication and extension approaches				
3	3.1	Characteristics – Clear, correct, complete and precise message, reliability, consideration of the recipient Skills – Observance, clarity and Brevity, Listening and Understanding, self-efficacy and self confidence	**15**	CO3
	3.2	Significance – Team work, Team building, problem solving and decision making skills, facilitate creativity and reduces misunderstanding		CO3
	3.3	Approaches – General Extension, Commodity specialized, Training and visit, Agricultural, Extension participatory, project, farming		CO5

4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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1. Bandarkar, P.I. and T.S. (2000). Methodology and Techniques of Social Research. Mumbai: Himalaya Publishing House
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7. Ray, G.L. (2015). Extension Communication and Management. Ludhiyana: Kalyan Publishers.
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1. Development Communication: Reframing the Role of the Media" by Thomas L. McPhail
2. "Communication for Development and Social Change" by Jan Servaes
3. "Theories of Development Communication" by Srinivas R. Melkote and H. Leslie Steeves
4. "Communication and Human Development: The Freirean Connection" by C. A. Bowers
5. "Media and Development" by Servaes and Malikhao
6. "Development Communication Sourcebook: Broadening the Boundaries of Communication" by Paolo Megalopolis
7. "Communication and Sustainable Social Change: Policy, Planning, Implementation" by George Cheney, Daniel J. Lair, and Debra L. Dougherty
8. "Environmental Communication and the Public Sphere" by Robert Cox
9. "Social Marketing and Social Change: Strategies and Tools For Improving Health, Well-Being, and the Environment" by R. Craig Lefebvre
10. "ICTs, New Media, and Development: Globalizing the Information Society" by Ingrid Volkmer

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Guidance and Counselling**
Type of Course	**VAC**
Course Code	**MG6VACHSC301**
Course Level	**300 -399**
Course Summary	The course acquaints the learner with the basic theoretical perspectives of counselling and guidance and also its application.

Semester	VI	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	-	-	60
Pre-requisites, if any	A foundational knowledge in psychology and interpersonal communication. Familiarity with basic counselling concepts as well as an awareness of the cultural and social context.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe the meaning, principles, goals of counselling and scope of counselling.	U	1
2	Explain the different theoretical approaches to counselling.	U	2
3	Apply counselling in different settings.	A	4,6
4	Examine the innovative approaches of counselling to be followed for children and adolescents.	An	1,6
5	Appraise various tests on intelligence, personality, and aptitude for children.	E	1,2
6	Develop skills in offering guidance and counselling.	S	4,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
1		**Fundamentals of Counselling**	10	
	1.1	Definition and meaning of Counselling, Goals of Counselling, Principles of Counselling. Scope of Counselling with special reference to the Indian scenario		CO1
	1.2	The counselling Process: Stages, Variables affecting the counselling process, Qualities and skills of a Counsellor-communication skills, Counsellee features.		CO1
Theories/Approaches to Counselling and Therapy				
2	2.1	Psychoanalytic Approach: Freud's psychoanalysis; Humanistic Approach: Client Centered Therapy, Carl Roger's Non-directive	15	CO2
	2.2	Behavioural Approach: Systematic desensitization, Aversive Conditioning, Behaviour modification.		CO2
	2.3	Cognitive Approach: Behaviour therapy (CBT); Transactional Analysis		CO2
		Make a visit to any four Counselling centre make a report on its functioning and the therapies used for different cases		
Special and Innovative approaches with children				
3	3.2	Counselling in different settings: School counselling, Career counselling, Family /relationship counselling, Workplace counselling, Hospital counselling, Grief/ Trauma counselling, Addiction counselling, Crisis counselling, Online counselling	20	CO3
	3.3	Talk therapy, Play therapy, Music therapy, Dance Therapy, Drama therapy, Art therapy, Bibliotherapy, Horticultural therapy, Yoga, meditation		C04

	3.4	Two weeks participation in a counselling centre and observe the counselling process / participate in the activities of a Child guidance clinic/ Remedial centre or Resource centre and report		CO6
	Related experience	**Psychological testing**		
	3.5	Tests for Intelligence: Binet-Stanford Test, Wechsler Intelligence Scale for Children, Raven's Progressive Matrices		CO5
		Tests for aptitude; Personality tests: 16 PF, Big Five personality inventory		CO5
		Projective Tests: Children's Apperception test, Draw a man test, Sentence Completion Test		CO5
		Use any one of the following for psychological testing and make a report: personality test/ Self Concept Inventory/ Self Esteem Inventory/ Emotional Maturity Scale/ Mental Health Scale/ Decision Making Scale		CO5
5		Teacher Specific Content This will be evaluated internally		

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	B.End Semester Examination			
	Written Examination			**50**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

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SEMESTER-VII

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Advanced Fashion Designing**
Type of Course	**DCC**
Course Code	**MG7DCCHSC400**
Course Level	**400-499**
Course Summary	This comprehensive course offers a holistic exploration of advanced principles in fashion design, computer-aided design (CAD), portfolio preparation, fashion accessories, fashion show management, and sustainable fashion practices.

Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	45+30=75
Pre-requisites, if any	Students should have a foundational understanding of fashion design concepts, basic garment construction techniques, and familiarity with computer usage for design applications.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe principles of pattern making and CAD in design.	A	1, 2, 7
2	Explain the essential elements of fashion portfolio and holistic preparation involved in organizing a fashion show	K	1, 4, 5
3	Demonstrate a comprehensive understanding of various accessories within fashion industry	U	1, 6, 10
4	Explain the principles of sustainable fashion	U	1, 3, 7
5	Create a comprehensive and visually compelling fashion portfolio incorporating all essential elements	U	2, 4, 9
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Principles of pattern making and Computers in fashion				
1	1.1	Principles of Pattern making - Dart manipulation, Added fullness, Contouring	**10**	CO1
	1.2	Computer Aided Design -Textile designing, embroidery designs, Garment designing -2D and 3D forms, Pattern making and grading		CO1
Portfolio preparation and fashion shows				
2	2.1	Basic elements in mood board, client board, fabric board/swatch board, accessory board, illustration board, story board, flat specs, cost sheet	**20**	CO2
	2.2	Fashion show – Basic preparation of fashion show – sound, light, models, ramp, choreographer, buyer invites, hair and make up, accessories, publicity, advertisement and invite design		CO2
	2.3	Fashion accessories: Types of accessories - aesthetic and functional purpose. Footwear – anatomy, types of toes and heels Umbrella – anatomy, different styles and types Bags and Wallets -Component parts Sun glasses – anatomy, glass technology Caps and Hats, Belts, ties, gloves, Hair accessories and veils, Wrist bands, Watches		CO3
Sustainable fashion				
3	3.1	Developments in sustainable fashion, Lifecycle of a Garment: reducing laundering, repair and maintenance, evaluation of apparel products, slowing fashion Product End-of-life: Reuse in fashion cycle, remanufacture, upcycling, approaches to upcycling, material recycling, closed loop production. Sustainable fashion brands in India.	**15**	CO4
Practical				
4	4.1	Fashion Portfolio Presentation- Number of garments in a collection is 2. a. Client Board- specifying the details of the client: place of residence, interests, hobbies, occupation, nature of work, age, preferences if any etc b. Mood Board- shows the mood/inspiration from which design is developed c. Illustration Board and flat specs– shows how a design is developed from flat sketch to illustration	**30**	CO5

		d. Fabric Board- shows the fabrics used in the garment with details e. Colour Board-shows the colours used in the collection f. Story Board g. Final presentation- constructed garment is put on the model and photographed h. Cost calculation		
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i. Laboratory Evaluation (25 marks)
ii. Record (10 marks)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Advanced Nutrition -I**
Type of Course	**DCC**
Course Code	**MG7DCCHSC401**
Course Level	**400 – 499**
Course Summary	This course is designed to introduce students to the functional aspects of macronutrients in our diet. A strong emphasis will be placed upon the aspects of physiology and biochemistry including digestion, absorption, assimilation and excretion of carbohydrates, fats and proteins. An understanding of these principles will enhance the student's ability to predict, diagnose and treat conditions associated with various states of disturbed metabolism. Furthermore, the course projects and assignments will introduce the students to current concepts in applied clinical nutrition via peer-reviewed research, discussion topics, reading assignments and links to relevant websites.

Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Understanding of basic nutrition principles, biochemistry, physiology and chemistry					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Differentiate levels of body composition and elucidate the significance in human nutrition	A	1,2
2	Understand components of energy balance	U	1,3.4
3	Cite physiological and biochemical functions of macronutrients Develop knowledge in the digestion and assimilation of nutrients and consequences of malnutrition	An	2,10
4	Relate human nutrition to the maintenance of health and the prevention of disease	E	10
5	Develop competence in the scientific foundation of nutrition and dietetics practice and research.	A	10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Body Composition and Energy Balance				
1	1.1	Body Composition- Significance.	15	CO 1
	1.2	Levels of Body Composition		CO 1
	1.3	Assessment of Body Composition – Direct, indirect and doubly indirect methods		CO 1
	1.4	Energy content of foods, measurement, Physiological Fuel Value		CO 2
	1.5	Total Energy Expenditure (TEE)- measurements		CO 2
	1.6	Components, basal metabolism, thermic effect of activity, thermic effect of food and adaptive thermogenesis.		CO 2
	1.7	States of energy balance		CO 2
	1.8	Current methodology for determining energy requirements		CO 2
	1.9	RDA, Regulation of energy intake		CO 2

	1.10	Chemical mediators of energy homeostasis, Chronic Energy Deficiency (CED) and Obesity		CO 2
Carbohydrates				
2	2.1	Nutritional importance, functions, sources, classification	10	CO 3
	2.2	Digestion, absorption and transport of carbohydrates		CO 3
	2.3	Glycaemic index, glycaemic load and satiety index, Factors affecting glycaemic index of foods		CO 3
	2.4	Hormonal control of carbohydrate homeostasis		CO 3
	2.5	Non glycaemic carbohydrates - Fibre, classification, components and sources, properties, role of fibre in human nutrition, requirements.		CO 3
	2.6	Resistant starch, factors influencing resistant starch content in foods and potential health benefits		CO 3
	2.7	Carbohydrates and exercise performance, role of multiple transportable carbohydrates		CO 3
Protein & Lipids				
3	3.1	Proteins- Classification, digestion, absorption and transport	20	CO 3
	3.2	Role of proteins and other nitrogen containing compounds		CO 3
	3.3	Protein turnover, nitrogen balance, obligatory nitrogen losses, current methodology for determining protein and essential amino acid requirements, RDA		CO 3
	3.4	Evaluation of Protein Quality- BV, DC, PER, NPR, NPU, chemical score, NDP Cal%, PDCAAS,DIAAS		CO 3
	3.5	Supplementary value of Proteins, Novel Protein Foods, improvement of nutritional quality of vegetarian diet		CO 3
	3.6	Classification, chemistry and structure of lipid		CO 3
	3.7	Fatty acids and its sources, functions,		CO 3
	3.8	Digestion and absorption lipids		CO 3
	3.9	Lipid transport and transformation in liver		CO 3
	3.10	Role of essential fatty acids and eicosanoids		CO 3
	3.11	Lipotropic factors, visible and invisible fats, plant sterols in human nutrition, Requirement of fat and fatty acids		CO 3
	3.12	Fat burners and replacers		CO 3

Nutritional Assessment and Planning				
4	4.1	Body composition measurements	30	CO 4
	4.2	Measurement of BMI, skinfold thickness, waist circumference, Hip Circumference (HC), MUAC and WHR. Assessment of body composition- Measurement of fat mass and fat free mass.		CO 4
	Energy			
	4.3	Calculating BMR		CO 5
	4.4	Energy intake and Expenditure		CO 5
	4.5	Energy Balance		CO 5
	Carbohydrates			
	4.6	Percent energy of carbohydrates		CO 5
	4.7	Survey of high fibre products in the market.		CO 5
	Protein			
	4.8	Chemical score computation of food items Calculating chemical score and NDP cal % of a recipe. Planning suitable dishes for supplementary feeding programmes based on protein quality.		CO 5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Quantity Food Preparation and Food Service Techniques**
Type of Course	**DCC**
Course Code	**MG7DCCHSC402**
Course Level	**400-499**
Course Summary	This course outlines the food preparation and service techniques in quantity food settings. Students become familiar with different types of food service establishments, theory of menu planning, portion control, ingredients, culinary terminology, and learn to read and evaluate menus. Recipe conversion and costing skills are developed. Different production schemes and product flow are examined, and discussed.

Semester	**VII**	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-		60

Pre-requisites, if any	Must be enrolled in one of the following Majors: Home Science, Dietetics, Nutrition, Food Service management, Nutrition Fitness &Health, Family & Community Science, Hospitality& Tourism Management

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand the objectives of different types of food service establishments, cuisines and types of service	U	1,2
2	Create skills in quantity food preparation and control techniques	C	1,2
3	Develop skills in menu planning and large scale food preparation and control techniques	S	1,2

4	Develop skill in controlling quantity food preparation, service & cost and asses the organisation and functioning of restaurants and Quantity Food production units.	E	1,2,7,8,9,10
5	Design Menu for different Catering outlets & understand the importance of Standard Recipe and verify the cost profit analysis of a food service unit	Ap	2,3,7,10
6	Evaluate the adequacy of quality & safety of food.	E	6,8
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
1	**Menu Planning, Purchasing, Receiving and Storage**			
	1.1	Menu- Definition Importance, Functions of Menu, Types of menus for different food service establishment, Steps in Menu planning, designing a menu card, presentation, pricing and evaluation.	15	CO1
	1.2	Procurement, product selection specification, Methods of purchasing and purchasing process		CO2
	1.3	Receiving Process, Storage –Types, pest control and sanitation, Inventory control- Physical and perpetual methods		CO6
Quantity Food Production and Quality Control				
	2.1	Standardisation of recipes –Definition, Importance, steps and methods, stepping up of recipes, portion control- Definition, need and tools	15	CO3
	2.2	Production forecasting and production scheduling,Food budget concepts, food costing, and food cost control		CO4
	2.3	Quality control in food preparations, Food laws and standards, Role of HACCP		CO6
Distribution and Service of Food				
	3.1	Types of cuisine and food service ,Food service delivery system-Centralised and Decentralised,Types of food service systems-conventional, commissary, ready prepared, assembly		CO1

	3.2	Styles of Food service – French, Russian, Gueridon, American, Buffet, Silver, Family Style, Self, Waiter-waitress service, Tray, Portable, plate, cafeteria, buffet service. Specialised forms of service (hospital, airline, rail, home deliver, catering and banquet, room and lounge service	**15**	CO1
	3.3	Beverages- Service and control measures- Alcoholic, Non-Alcoholic beverages		CO1
Creating Standardized Indian Snack Recipes for Cafeteria Production: From Selection to Cost Analysis				
4	4.1	Selection of 20 Indian regional cuisine snack/for quantity food production/ industrial menus	**15**	CO1
	4.2	Standardisation of recipes		CO2
	4.3	Setting up of standardized recipes for quantity products (more than 50 portions)		CO5
	4.4	Planning, purchasing, preparing and serving foods in the college cafeteria. Cost and profit analysis		CO8
	Related experience	Visit /Training in a quantity /quality-based food production unit related with baking and confectionary /food quality control unit /food service unit		CO7
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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2. R. S. Nathniel-Catering Management –
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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Public Health Nutrition**
Type of Course	**DCE**
Course Code	**MG7DCEHSC400**
Course Level	**400-499**
Course Summary	This course aims to provide a comprehensive overview of Public Health Nutrition, emphasizing the concept, importance, and challenges in the context of India. It covers various units to equip students with knowledge about prevalent public health problems, assessment techniques, and strategies for intervention and prevention.

Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	**60**
Pre-requisites, if any	Students with basic understanding of nutrition are eligible for the course.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Explain food and nutrition security in India.	E	1,6,7
2	Apply the ABCD technique and conduct different types of dietary assessments in community settings.	A	1, 2,6
3	Identify the epidemiology of nutritional disorders.	A	1, 6
4	Evaluate the strategies of nutrition intervention programs.	E	2, 6,7
5	Describe national and international organizations for combating malnutrition.	U	1, 2,5,6
6	Examine the nutritional status of a community to combat nutritional disorders.	An	2,5,6
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course Description	Hours	CO No.
Food & Nutrition Situation in India, Assessment of Nutritional Status in Community Setting				
1	1.1	Definition – Health, Community health. Health care deliverysystem at central, state and district level	**15**	CO 1
	1.2	Hunger in India, Global Hunger Index. India State hungerIndex (based on current statistics).		CO 1
	1.3	Food and nutrition security in India – production, availabilityand consumption of food in India. (based on current statistics)		CO 1
	1.4	Nutritional Assessment – importance, objectives, types: indirect assessment and direct assessment.		CO 2
	1.5	Direct assessment- Anthropometry: height, length, weight, MUAC, waist circumference, WHR, skin fold measurements		CO 2
	1.6	Biochemical assessment for nutritional deficienciesClinical assessment of nutritional disorders		CO 2
	1.7	Dietary assessment: family diet survey, individual diet survey, quantitative diet surveys, institutionalized surveys,food balance sheet.		CO 2
	1.8	Indirect assessment – mortality and morbidity rates		CO
Epidemiology of Nutritional Disorders				
2	2.1	Epidemiology – definition, aims, uses, types, epidemiologicalstudy methods.	**15**	CO 3
	2.2	PEM – prevalence, types, aetiology, clinical symptoms, consequences, prevention and management.		CO 3
	2.3	Vitamin A deficiency – epidemiology, aetiology, clinical symptoms, consequences, intervention strategies for preventing vitamin A deficiency disorders (VADD).		CO 3
	2.4	Iron Deficiency Anaemia– prevalence, epidemiology, aetiology, approaches for prevention and control of anaemia: National Nutritional Anaemia Control Programme.		CO 3
	2.5	Iodine deficiency disorders – epidemiology, aetiology, consequences, Iodine deficiency Disorders Control Programme of India. Zinc deficiency – epidemiology, aetiology, clinical		

		manifestations of zinc deficiency, zinc supplementation in pregnancy.		CO 3
	2.6	Non communicable chronic disorders - epidemiology, prevalence, control measures of – Diabetes, Hypertension, CHD, Obesity, Cancer.		CO 3
Nutrition Intervention Programmes & Strategies to Combat Malnutrition				
3	3.1	National Nutrition Policy Preschool feeding programme, Integrated Child Development Services (ICDS) , Mid-Day Meal Programme (MDM) Special Nutrition Programme (SNP), Wheat-Based Supplementary Nutrition Programme (WNP), Applied Nutrition Programme (ANP), National Nutritional Anaemia Prophylaxis Programme (NNAPP), Balwadi Nutrition Programme (BNP), Food & Nutrition Board (FNB), National Iodine Deficiency Disorder Control Programme (NIDDCP).	**15**	CO 4
	3.2	National Program for Prevention of Blindness due to Vitamin A Deficiency		CO 4
	3.3	International organizations concerned with food and nutrition: FAO, WHO, UNICEF, CARE, AFPRO, CWS, CRS World Bank and others.		CO 5
	3.4	National organizations concerned with Food and Nutrition: ICMR, ICAR, CHEB, CSWB, SSWB		CO 5
	3.5	Economics of Nutrition: Malnutrition and its economic consequences; Economics in Nutrition – Food security, food production and food pricing.		CO 5
4	4.1	Assessment of nutritional status of pre-schoolers	**15**	CO 6
	4.2	Use and interpretation of Growth Charts		CO 6
	4.3	Preparation of low cost recipes-low cost recipes, cyclic menu and one dish meal		CO 6
	4.4	Planning and implementation of a nutrition and health education programme in the community.		CO 6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii)Essay type questions: Answer any2 question out of 4 (2x10=20)

REFERENCES

1. Maurice B Shils ,MosheShike. A, Catherine Ross, Benjamin Cabellero, Robert J Cousins, Lippincott Williamsal Wilkins (2006). Modern Nutrition in Health and Disease, Lippincott Williams and Wilkins Publishers.
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4. Maxcy-Rosenau-Last Public Health & Preventive Medicine, Fourteenth Edition Ed Robert Wallace, MD, et al.
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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Apparel Manufacturing Technology**
Type of Course	**DCE**
Course Code	**MG7DCEHSC401**
Course Level	**400-499**
Course Summary	This course provides an in-depth exploration of the garment industry, focusing on key elements such as marker planning, spreading, cutting, seams and sewing, fusing, pressing, packing, trims, accessories, and practical garment manufacturing elements

Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	**60**
Pre-requisites, if any	Students should have a foundational understanding of basic garment construction, sewing techniques, and familiarity with textile materials.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Analyze the apparel industry's organizational structure and various departments	U	1, 6, 7
2	Explain the concepts of marker making, spreading, cutting machine mechanisms, notches, drills and thread markers	K	1, 2, 10
3	Explain classifications of industrial sewing machines, seams and stitches	U	1, 3, 9
4	Describe purpose and types of fusing, pressing and packing methods, trims, closures, and accessories.	U	1, 3, 9
5	Developing a collection showcasing different types of seams, stitches, and applied trims and accessories	A	2, 4, 7, 10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Overview of Garment Industry				
1.	1.1	Overview of apparel industry, organization structure of apparel manufacturing industry.	**8**	CO1
	1.2	Different departments in Garment industry – design, marketing, finance, purchase, production and operations		CO1
Cutting Room Components				
2.	2.1	Markers: Introduction to markers, marker planning, digitizer, plotters, duplicating and markers. Spreading: manual, semi, fully automatic, Quality requirements for spreading, types of spread	**15**	CO2
	2.2	Introduction to cutting, Mechanism and technical features - Straight knife, round knife, band knife cutting machines, die cutting, laser cutting, plasma cutting, water jet cutting and ultrasonic cutting Principles of notches, drills and thread markers, Computerized cutting- Computerized controlled cloth spreaders and cutting heads, Bundling and ticketing		CO2
Production Room Components				
3	3.1	Sewing machine – classification – Single needle, double needle. Types of bed – Flat bed, raised bed, post bed, cylinder bed, side bed. Special sewing machines -Overlock, button hole, bartack, feed of arm, blind stitch, button sewing machine Seams - classification – Class-1, Class-2 Class-3, Class-4, Class-5 and Class-6 Stitches - classification - Class 100, 200, 300, 400, 500, 600	**22**	CO3
	3.2	Fusing equipment, methods; Pressing - purpose, types of pressing equipment		CO4
	3.3	Packing - types of packing and packing materials, types of carton packing, quality specification for packing materials, requirements for packing		CO4
	3.4	Trims: Closures - zippers, buttons, hook and eye, hook and loop, Velcro, elastic; lining and interlinings, shoulder pads, waddings, rivets, eyelets Accessories - labels, hangtags, stickers, polybag, carton box, cardboard, tapes		CO4

Applications in Garment Construction and Finishing				
4	4.1	Develop a collection of samples for different types of seams	15	CO5
	4.2	Develop a collection of samples for different types of stitches		CO5
	4.3	Application of trims: zippers, buttons, hook and eye, hook and loop, Velcro, elastic		CO5
	4.4	Record the use of Accessories - labels, hangtags, stickers, polybag, carton box, cardboard, tapes		CO5
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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1. Rathinamoorthy, R., Surjit, R. (2015). Apparel Machinery and Equipments. India: CRC Press.
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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Inclusive Education**					
Type of Course	**DCE**					
Course Code	**MG7DCEHSC402**					
Course Level	**400-499**					
Course Summary	This course envisions to acquaint the learners with an understanding of the causes, characteristics, diagnosis of disabilities affecting children. It will cover special education and rehabilitation techniques, as well as strategies for disability prevention.					
Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	A basic understanding of child development and an interest in gaining knowledge about the causes, characteristics, and diagnosis of disabilities affecting children. Additionally, an interest in special education, rehabilitation methods, and disability prevention.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Comprehend the concept and characteristics of children with special needs.	U	1, 3, 7, 10
2	Analyse the special education strategies and intervention available for children with orthopedic impairments.	An	1, 3, 6, 10
3	Choose suitable rehabilitative measures and special education for children with sensory disabilities.	An	1, 4, 6, 7, 10
4	Examine the special education, rehabilitation measures and intervention strategies for children with mental and neurological disorders.	E	1, 6, 8, 10

-5	Detect different intervention strategies for emotionally disturbed and socially maladjusted children.	C	1, 6, 7, 10
6	Develop practical skills relevant to handle children with special needs.	S	1, 7, 8, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Concept of Children with Special Needs				
	1.1	Definition, types, demographic profile of children with special needs in India.	**15**	CO1
	1.2	Special education –recent trends; National Institutes for children with special needs. RCI.		CO1
	1.3	Rights and Provisions for disabled in Government Agencies- Policies, Government provisions, Concessions, Facilities and Legislations for challenged children.		CO1
Children with Orthopaedic, sensory impairments, mental and neurological disorders				
	2.1	Definition, Classification, Characteristics	**15**	CO2
	2.2	Etiological Factors, prevention,		CO3
	2.3	Special Education, Treatment (Intervention) and Rehabilitation		CO4
Emotionally Disturbed and Socially Maladjusted Children				
3	3.1	Definition, Classification	**15**	CO5
	3.2	Etiology, Identification and Characteristics		CO5
	3.3	Special Education, Treatment and Rehabilitation Measures, intervention strategies		CO5
Practical Exploration in Special Needs Rehabilitation and Education				
4	4.1	Visit and observe the services offered by rehabilitation centres for children with special needs.	15	CO6

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

	4.2	Conduct an awareness programme based on any topic related to children with special needs		CO6
	4.3	Two-week training programme in rehabilitation centres catering for		CO6
	4.4	Prepare aids (one each) suitable for visual, auditory, tactile and kinesthetic stimulation in children.		CO6
	4.5	Prepare study materials/teaching aids for children with differently abled and test the efficiency of it		CO6
5		Teacher specific content This content will be evaluated internally.		

Mode of Assessment

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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6. Singh, B (2005), Modern Teaching of Exceptional Children, Animal Publishers.

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Research Methodology and Statistics**					
Type of Course	**DCE**					
Course Code	**MG7DCEHSC403**					
Course Level	**400-499**					
Course Summary	The research methodology course is a comprehensive exploration of fundamental principles and ethical considerations in research. The course further encompasses sampling techniques, research methods, and tools, emphasizing the importance of reliability and validity. Descriptive statistics, measures of central tendency and dispersion, correlation, and regression analysis are explored. The curriculum also includes an in-depth study of sampling distributions, hypothesis testing, and the use of statistical software for practical application. Additionally, students learn preliminary data processing, graphical representation, and research report writing skills.					
Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	The prerequisites for this course include a foundational understanding of research concepts and statistical methods.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe research designs, ethical considerations, and formulate hypotheses.	R	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
2	Explain sampling techniques, methods and tools used in research	U	1, 2, 3, 4, 6, 8, 10
3	Apply appropriate statistical techniques to analyze numerical data and draw inferences.	U	1, 2, 3, 4, 6, 7, 8, 9, 10
4	Explain the concepts of variables sampling distribution and tests of significance in data analysis.	U	1, 2, 3, 4, 5, 8, 9, 10

5	Recognize the methods and techniques for scientific writing.	U	1, 2, 3, 4, 5, 6, 7, 8, 10
6	Analyse the data using statistical software	An	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
1		**Fundamentals of Research, Sampling techniques, research methods and tools**		
	1.1	Definition, Objectives and Characteristics of research, Types of Research – Basic, Applied and Action research, Exploratory and Descriptive, Ex-post facto research.	**20**	CO1
	1.2	Ethics in research: Permission, Data Fabrication and falsification, Plagiarism, IPR. Research design: Research problem: sources, Statement of problem, Criteria for the selection of research problem.		CO1
	1.3	Definition of concepts, operational definition; variables – independent and dependent, control and intervening variables Hypothesis: Meaning and importance, types of hypotheses.		CO1
	1.4	Sample: Sampling techniques, Size of sample		CO2
	1.5	Merits and Limitations of sampling, Sampling and Non-sampling errors.		CO2
	1.6	Methods: Survey, observation, interview, experimental, case study.		CO2
	1.7	Tools: Questionnaire, Schedule (for interview and observation) Rating Scales, Attitude Scales. Reliability and validity.		CO2
2		**Descriptive Statistics**	**10**	
	2.1	Measures of Central Tendency: Mean, Median, Mode.		CO3
	2.2	Measures of Dispersion: Range, Quartile deviation, Standard deviation.		CO3

	2.3	Coefficient of variation: Correlation and Regression. Coefficient of Correlation: Karl Pearson and Rank Correlation Coefficients.		CO3
3		**Sampling distribution and Tests for significance**	**20**	
	3.1	Random variable, Normal distribution, Sampling distributions.		CO4
	3.2	Standard normal distribution and calculation of probability of events: F, χ^2 and t distributions.		CO4
	3.3	Standard error, its importance and applications.		CO4
	3.4	TestingofHypothesis:TypeIandTypeIIerrors,SignificanceLevelandsizeof test, critical region, Concept of P value in testing.		CO4
	3.5	Large and small sample tests (Z,t, Fand χ^2 statistics), ANOVA, Use of software packages in data analysis– SPSS		CO4
	3.6	Statistical analysis usingsoftware-Using any statistical software perform the following: Descriptive statistics, Graphical Representation, Sorting and Organizing Data		
4		**Presentation of data and report writing**	**10**	
	4.1	Preliminary processing of data: Classification, Tabulation of data		CO5
	4.2	Representation of data: diagrams and graphs		CO5
	4.3	Research report writing: Parts of dissertation-Abstract, Introduction, Review of Literature, Methodology, Results and Discussion, Summary and Conclusion, Bibliography		CO5
	4.4	Articles in journals, Writing for grants.		CO5
5		**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.		

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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3. Denzin, N. K., & Lincoln, Y. S. (Eds.) (1994). Handbook of qualitative research. Thousand Oaks, CA: Sage.

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Community Development**
Type of Course	**DCE**
Course Code	**MG7DCEHSC404**
Course Level	**400-499**
Course Summary	This course covers community development principles, rural initiatives, community-based organizations, phases, and evaluation methods, emphasizing the role of student volunteers, and addressing sustainability through the lens of Sustainable Development Goals (SDGs).

Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Interest in Extension education					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Distinguish community development from community organization	An	1,2
2	Comprehend significant phases in community development	K	1,2,4
3	Gain knowledge on sustainability and community development concepts	U	3,4
4	Demonstrate the role of community-based organizations in community development	A	1,3
5	Assess the efficiency of extension programme using methods and tools for evaluation.	E	1,2,5
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Concept of Community Development				
1	1.1	Meaning and Definition of community development	20	CO1
	1.2	Principles, Philosophy and objectives		CO1
	1.3	Elements of community development - Community development as a process, community development as a method, community development as a programme, community development as a movement		CO1
	1.4	Rural development initiatives prior to independence and post-independence		CO1
Role of Community Based Organizations				
2	2.1	Conceptual meaning and definition of community based organizations	**10**	CO2
	2.2	Role, structure and functions of community organizations		CO2
	2.3	Models of community based organizations		CO2
	2.5	Approaches of community based organizations		CO2
Phases of Community Development and Evaluation of Community Development Programme				
3	3.1	Phases of community development – definition and needs	**20**	CO 3
	3.2	Seven Phases of community development: sequence and exclusive roles		CO 3
	3.3	Relationship, Assessment, Discussion, organization, reflection, modification, continuation		CO 3
	3.4	Personnel involved in community development activities – qualities and role		CO 3
	3.5	National Extension Service – Role of student volunteers in community development		CO 3
	3.6	Review of community development programmes - Evaluation methods, Analysis /merits and demerits		CO 3
	3.7	Community involvement and assay of Benefits		CO 3

	3.8	Incentives and Prizes/ Awards		CO 3
Sustainability and Community Development				
4	4.1	Concept and need of sustainable community development	**10**	CO4
	4.2	SDGs – Sustainable Development Goals – concept		CO4
	4.3	Significance of SDGs to community development		CO4
	4.5	Sustainability in community development- aims, objectives and principles		CO4
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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1. Banta Sharma Nidaugmayum (2015). Community organization and social registration. New Delhi: Janadaprakashan.
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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Sustainable Resource Management**
Type of Course	**DCE**
Course Code	**MG7DCEHSC405**
Course Level	**400-499**
Course Summary	The Course enable the students with knowledge, skills, and values that are essential for creating a more sustainable and resilient future. Students gain a comprehensive understanding of natural resources, including renewable and non-renewable sources. This knowledge extends to the interconnectedness of ecosystems, promoting a holistic perspective on environmental systems. The course equips students with critical thinking and problem-solving skills. Students become environmentally conscious and develop a sense of responsibility towards the planet. This mindset encourages sustainable practices in their personal and professional lives, contributing to the global effort to protect natural resources.

Semester	VII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		4	-	-	-	60
Pre-requisites, if any	Basic understanding of resource management					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	To identify various community resources and their efficient management	U	1,2,7
2	Inculcate eco concerns in students and analyse energy management	An	1,2

3	Fosters a sense of global citizenship where students recognize the interconnectedness of environmental issues of water pollution and need for conservation	E	2,6,7
4	To develop skill in sustainable waste management	S	3,5
5	Create awareness on sustainable resource management	C	1,7
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Environmental resources and management				
1	1.1	Natural Resources: Land, Water, Soil, and Air – Depletion and Crisis, Impact on human beings, interrelationship between population and development	20	CO1
	1.2	Environmental pollution : causes and effects – types of pollution and their global, regional and local aspects, air, water, land/soil pollution, Noise pollution – source, measurement, effects and control		CO1
	1.3	Global warming, acid rain and ozone layer depletion.		CO1
	1.4	Environmental Protection Measures: Environmental protection laws and action at different levels Environment management through conservation of resources, green practices pertaining to environmental issues		CO2
	1.5	Life style changes for creating sustainable environment, social responsibility towards sustainable development and social movements end route for better environment.		CO2
Energy Management				
2	2.1	Sources and classification of energy, patterns of energy use in the past, present and in the projected future, environmental/ecological impact of their over exploitation	**20**	CO3
	2.2	Energy crisis meaning, need for combating energy crisis, measures at micro level, energy		CO3

		and climatic issues. Alternate energy sources, their potentialities and environment impacts of their use, Solar energy – Significance and techniques of harnessing - solar devices and its working, advantages and limitations.		
	2.3	Wind energy wind mill – working applications – advantages and limitations. Energy from biomass – characteristics, Biogas plants, Smokeless chulah/ improved chulah; Energy conservation – need, ways, end-use energy conservation		CO3
Water and waste management				
	3.1	Water related problems – quantitative, qualitative, Water quality and standards - Home scale, small scale and large scale purification techniques. Ways of augmenting water resources, rain water harvesting – need and techniques, irrigation – drip and sprinkler methods; Sources of pollution of surface and ground water Water pollution parameters – physical, chemical and biological; Types of water pollutants; Effects of water pollution on water bodies - eutrophication, impact of water pollution on aquatic life, vegetation and human health; control measures	20	CO3
	3.2	Classification and characteristics of waste, the need of a good waste management programme Different methods of solid waste disposal – dumping, composting / vermin-composting, incineration, hazardous waste management; Sources and classification, Storage and collection of hazardous wastes, Radioactive waste sources and types – control measures; Electronic waste (e-waste): Sources and types, constituents of e-wastes, recycling of e-waste and its environmental consequences, Management of e-wastes, Basel convention. Sewage/ waste water, methods of treatment and disposal; Sanitary latrine – meaning, types and working; Sullage disposal – problems and		CO4

		solutions – soak pit, its construction and functioning.		
4	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture	
	Mode of Assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Assignment/project/any other	
			Test paper- II/open book test/any other	
Total				**30**
	B.End Semester Examination			
	Written Examination			**70**

End Semester Examination

Theory: 70 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: Answer any 6 questions out of 8 (6x5=30)

iii) Essay type questions: Answer any2 question out of 4 (2x10=20)

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1. Asthana D. K & Asthana, M (2006) Environment Problems and Solutions, S. Chand & Company Ltd., New Delhi.

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SEMESTER-VIII

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Early Developmental Stimulation**					
Type of Course	**DCC**					
Course Code	**MG8DCCHSC400**					
Course Level	**400-499**					
Course Summary	This course envisions to acquaint the learners with developmental milestones from various perspectives, enabling them to recognize potential developmental delays in children and equip them to create developmentally appropriate learning experiences.					
Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	45+30 = 75
Pre-requisites, if any	A foundational understanding of child development, as well as an interest in identifying and addressing developmental delays in children.					

COURSE OUTCOMES

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Describe the developmental milestones in developmental perspectives.	U	1, 2, 4, 10
2	Appraise the importance of developmental stimulation in early years.	An	1, 2, 6, 8, 10
3	Analyse the causes and the tools for assessment of developmental delay	An	1, 6, 8, 10
4	Assess the appropriateness of early intervention techniques and tools for overcoming developmental delays.	E	1, 4, 7, 10
5	Develop skill in assessing diverse early intervention approaches for children with developmental delays and designing awareness programs and aids on topics related to early developmental stimulation.	S	1, 6, 8, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Content for Classroom transaction (Units)

Module	Units	Course description	Hrs	CO No.
Developmental Milestones and early stimulation				
1	1.1	Definition. Physical and Motor, Intellectual, Social & Emotional, Language milestones	12	CO1
	1.2	Developmental milestones and its significance in overall development		CO1
	1.3	Definition of early stimulation – importance and benefits.		CO2
	1.4	Role of parents- Mother the key stimulator, Safety Measures to be taken while giving stimulation		CO2
	1.5	Newborn stimulation at home, baby massage, Touch therapy and its effects on infants, Importance of touch for development in infancy		CO2
Developmental Delays – Assessment				
2	2.1	Definition and causes for developmental delay.	**13**	CO3
	2.2.	Introduction to assessment tools used in early intervention – TDSC, DASII, Denver, CDC grading for major motor milestones, MCHAT, Autism Screening Tool, Language Evaluation Scale, Trivandrum (LEST), Bayley's scale.		CO3
Early Intervention for Developmental Delays				
3	3.1	Definition of early intervention, its need and importance.	**20**	CO4
	3.2	Sensory integration therapy, occupational therapy, speech therapy for children with developmental delays		CO4
	3.3	Techniques of intervention used for head control, rolling, creeping, sitting, standing and walking etc. Age appropriate toys and materials used in intervention.		CO4

	3.3	Activities to foster/ stimulate language development, socio-emotional development, and cognitive development		CO4
Practical				
4	4.1	Observe and study the early intervention approaches adopted to children with developmental delays (Occupational therapy, sensory integration, speech therapy)	30	CO5
	4.2	Visit, observe and report activities of any 2 early intervention centres		CO5
	4.3	Conduct an awareness programme for rural/ urban mothers on importance of early developmental stimulation		CO5
	4.4	Prepare aids (one each) suitable for visual, auditory, tactile and kinesthetic stimulation in children.		CO5
	4.5	Prepare an e-learning material on any topic to early developmental stimulation		CO5
5	5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.		CO5

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Hospitality Management**					
Type of Course	**DCC**					
Course Code	**MG8DCCHSC401**					
Course Level	**400-499**					
Course Summary	The course helps the students to develop skill in managing the accommodation department and dealing with the procedural aspects of front office and housekeeping sections of the hospitality institutions, and also develop social skills and effective communication while dealing with guests. This course aims to provide an understanding of the housekeeper's role in the provision and supply of accommodation and cleaning services, as well as evaluating types and materials used throughout the hospitality industry.					
Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		45+30= 75
Pre-requisites, if any	**The student who has taken Home Science as a Major component in the second year.**					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Identify the functions of various departments of Hospitality Industry	U	1, 2
2	Describe various records and registers for control in the housekeeping and front office departments of hospitality industry	K	3
3	Organize and execute duties, training and appraisals of the staff and conceptualize the staffing requirement.	A	3, 4

4	Develop personal skills and in accommodation operation and services	A	5
5	Design and manage Linen room, Laundry and suggest the types of cleaning agents and procedures for different levels of guest room and common area cleaning.	S	6
6	Plan and execute safe and aesthetic treatments for Interior enhancement of hospitality institutions and create a secure working environment	A	2, 6, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to Hospitality industry and Front Office				
1	1.1	Classification of hospitality Institutions, Importance of tourism in hospitality industry, Types of hospitality operations. Major Departments in a hospitality Institution-classifications and Interdepartmental relationship. Manpower Planning, Staff Recruitment, Job Specifications and Job Descriptions and Training.	16	CO1
	1.2	Front Office Management- Basic Functions, Layout and sections, organizational structure and Staff Designations, Duties, Qualities and Etiquette.		CO2
	1.3	Basic reservation system, Guests cycle-Procedures of check- in and check-out, Registration, C-form, Room types and Tariff structure, PMS.		CO2
	1.4	Coordination and communication of the front office with other departments; front office records		CO3
	1.5	Lobby management, Guests services, VIP Procedure, Key handling and control, Concierge services, Hostess		CO2
Housekeeping , Linen and Laundry Management				
2	2.1	Definition, organization and functions of housekeeping department, organizational Hierarchy and Staff designations, duties and responsibilities of housekeeping employees.	16	CO4

	2.2	SOP - Standard Operating Procedures - Layout, duty roaster, Interdepartmental coordination and communication.		CO4
	2.3	Classification and selection of linen, Layout and physical attributes of Linen room. Linen Distribution and Condemnation		CO5
	2.4	Upkeep and Sanitation- Cleaning equipment, cleaning agents and maids' trolley, Sterilization, disinfection, Pest Control- control of infestation, Room inspection checklist. Cleaning Guest rooms and service areas- procedures and principles, types of room cleaning- daily, weekly, spring cleaning and turn down service.		CO6
	2.5	Laundry: Types, Layout, Equipment, Methods of washing and finishing processes.		CO5
Safety and Aesthetic treatments of Indoor & Outdoor Environment:				
3	3.1	Safety Aspects- Safety education and First Aid, General Security measures- fire prevention and control, Accident prevention.	13	CO6
	3.2	Floral decorations, Napkin folding, Table settings for different occasions. Interior Decoration Trends in the field of Hospitality, Indoor gardens and Landscaping		CO6
	3.3	Eco friendly concept in Hospitality Field- Ecotels – Energy and Water Conservation		CO6
Practical of Hospitality Management				
4	4.1	Visits to front office and housekeeping departments of a hospitality institution	30	CO1
	4.2	Photographic evaluation of the layouts of Front office, Housekeeping , Linen and Laundry in hotels		CO5
	4.3	Role play of guest handling / Guest Cycle/ Practical Bed making procedure / Linen Distribution/ First Aid		CO5
	4.4	Aesthetic treatments - Table setting / Flower Arrangement / Curtain Styles / Napkin Folding		CO6
	4.5	Creation of Art Materials from Condemned Linen and conducting exhibition of accessories created with discarded materials.		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	1Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University, Kottayam
Programme	**BSc (Hons) Home Science**
Course Name	**Commercial and Residential Space Designing**
Type of Course	**DCE**
Course Code	**MG8DCEHSC400**
Course Level	**400-499**
Course Summary	This Comprehensive and Innovative Interior Space Design course is designed to equip students with the necessary knowledge and skills required to enter the field of interior design. With an emphasis on both residential and commercial spaces, this curriculum fosters creativity while ensuring practical application of theoretical concepts. Through proper training, participants will learn how to efficiently organize space, determine design and décor preferences, and manage projects effectively. Students will explore current trends in the field and develop their critical thinking and problem-solving abilities to tackle complex design challenges. Furthermore, they will have ample opportunities to apply their newly acquired skills through hands-on projects. Tailored to meet industry demands, our course covers various aspects of interior design, including computer-aided design techniques.

Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		45+30= 75

Pre-requisites, if any	Complete the Semester V course in 'Designing Interior Spaces' and / or should have a basic knowledge of the spatial concepts, space organization and ergonomics and aptitude in fine arts and drawing.

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
After the successful completion of the course the student should be able to:			
1	Describe Space standards after the comprehensive study of Anthropometrics and spatial requirements for optimal design solutions.	U	1, 3
2	Analyse residential and commercial properties, providing insights into design considerations and best practices.	An	1, 6
3	Devise conceptual designs through technical drawing techniques and communicate design ideas to clients through artistic expressions.	C	1, 4
4	Handle real-world challenges in small scale project management by virtue of hands-on experiences during internships.	S	2,5, 9
5	Acquire skill in encompassing environmentally and socially responsible concepts into design work.	S	4, 6
6	Keep abreast of current trends, technological advancements, and sustainable practices in interior design and materials selection through publications, seminars, and industry visits.	E	6,9, 10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hours	CO No.
Fundamentals of Interior Planning and Design Review				
1	1.1	General influences and objectives of interior space design – spatial awareness, theme, style and symbolism	12	CO1
	1.2	Ergonomics in Interior Space Design- Principles and Anthropometrics for space planning. Ergonomic designs of Work spaces - Optimum working heights, work triangle.		CO1
	1.3	Classification of life spaces for various activities, Functional designs to suit different purposes, age groups and special consideration to Persons with special needs (PWD, Aged and Children)		CO1

	1.4	Professional Practice -Scope of Interior Design as a profession, Role and Career options of Interior Designer. Portfolio preparation. Computer in designing - Software for design development and visualization.		CO5
Interior Design Methodology				
2.	2.1	Engineering Drafts man ship- drafting tools; paper sizes and layout, Technical Lines and Lettering, Scales and Measurements, Symbols and Abbreviations, Tracing, Shading, Sciography, Rendering Techniques.	15	CO4
	2.2	Technical and free hand drawing- Orthographic drawing of house plans, Metric Drawings- Isometric, Axonometric and Oblique, Perspective drawing- One point and Two point.		CO4
	2.3	Past, Present and future of Architecture-A brief outlook into the evolution of Architecture and Design. Influence of technology and materials on Future designs, Sustainable and Technical materials		CO3
Residential and Commercial Space Planning and Design				
	3.1	Interior Space organization in Residential areas- Standard Dimensions and Layouts, Creation of Mood and Illusion.	15	CO1
	3.2	Commercial Space Design- Planning considerations, design and layout of Hospitality areas, Offices, Institutions, Merchandising areas. Barrierfree / Inclusive designs for Public spaces.		CO1
	3.3	Visual Merchandising: Visual graphics and signage, Designing Display units, Thematic Decor for Window display and Events		CO3
	3.4	Resources for Interior Design- finishes and fixtures for floor, walls, ceilings, etc. Essential Services - Plumbing and Sanitation, Electricity, Lighting, HVAC, Safety and security features.		CO6
	3.5	Specialized Services In Interiors- Acoustics, Fenestration, Audio-Visual and Display Systems, Security Systems, Building Automation, Human Sensitive Devices		CO6

Practical				
4	4.1	Design Communication and Representational techniques (Any 3) - Drawing of Technical Lines, Lettering, Typography Exercises in Tracing, Shading, Rendering, etc. (One each)	30	CO4
	4.2	Metric Drawings - Isometric, Axonometric and Oblique – of simple 3D objects and Furniture. Perspective Drawing of Interior Spaces - One point and Two point.		CO4
	4.3	Drafting House plans: Bubble diagram, Line drawing, drawn to scale complete with symbols and abbreviations		CO3
	4.4	Residential Space Planning and Design: Interior Scheme preparation of a residential project		CO4
	4.5	Commercial Space Planning and Design: Preparation of an Interior Scheme of a small commercial project		CO4
	4.6	Design for events : (Minimum 1) • Any 1 Dias / Hall Decoration • Any 1 Decoration for special occasion or celebrations at home • Any 1 Window / Shop display		CO5
	4.7	Exercises in Visualization- Model making of furniture and simple 3D objects. (Any 2) Develop a building model showing details of interior and exterior components using colour, lighting and landscape design.		CO3
	4.8	Case Study and Evaluation (One each) of any Commercial or Residential area: Photographic evaluation of interiors with the interior layout.		CO2
	4.9	Colloquium of Field Exposure and Market Study of decoration materials for interior design: ● Sanitary fittings ● Electrical and Light fixtures ● Finishing materials ● Furniture, furnishing, accessories etc. (Any 1)		CO2
	4.10	Field Trips/ Seminars/ Workshops/ Exhibitions (Any 1)		CO10

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

	4.11	Internship (Either is Compulsory) (Outside class hours / during semester break) : Training in any Design Software (such as CADD, AUTODESK, 3DS MAX/ Sketchup or any other popular design software) / One month Internship in a Design or Decoration firm		
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Applied Ergonomics**
Type of Course	**DCE**
Course Code	**MG8DCEHSC401**
Course Level	**400- 499**
Course Summary	Applied ergonomics focuses on creating environments that reduce the risk of musculoskeletal disorders and other health issues. Students learn to design workspaces and tools that promote proper posture and movement, leading to improved health and safety for individuals in various settings. It emphasizes a user-centered approach to design. Students learn to consider the needs, abilities, and preferences of end-users, ensuring that products and systems are tailored to meet their requirements. This user-centric focus can lead to the creation of more effective and user-friendly products.

Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		45+30= 75
Prerequisite, if any	Awareness of motion involved in doing a particular work and basics of work related issues.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand workload and anthropometry	U	1
2	Analyse wrong posture, and identify its ill effects and suggest better work postures and anthropometrics	An	2
3	Apply ergonomic concepts in the day today human work environment, to ensure health, safety and welfare of human resources	A	10

4	Apply ergonomic solutions suitable to increase the efficiency of the work, worker and working environment.	A	6
5	Understand the environmental parameters and other design consideration for workstation/ tools/ equipment	U	7
6	Customize and optimize the use of ergonomics principles for better health	C	8
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to Ergonomics and fundamentals of work physiology				
1	1.1	Importance, Principles, Components, Definition and Scope of Ergonomics Impact of Ergonomics in workplace designing, Man-Machine and Environment System interaction.	20	CO1
	1.2	Physiological factors involved in muscular work, Static and Dynamic muscular effort, Energy requirement for various activities.		CO1
	1.3	Identification and Analysis of postures - Sitting, standing, reaching, moving- Static and Dynamic work, Body mechanics. Wrong postures and its ill effects on cardiovascular and muscular skeletal system, Fatigue - Classification, Causative factors and alleviating techniques Work simplification - meaning and techniques, Mundell's classes of changes.		CO2
	1.4	Work related MSD- cause and prevention, Correct techniques of lifting and carrying weights, Technique such as OWAS, RULA, REBA etc.		CO2
Anthropometry and Environmental Parameters in Ergonomics				
	2.1	Human body as a system of leavers, Anthropometric measurements, percentile humans, anthropometric data base.	15	CO3
	2.2	Accessible Workstations, Nutrition and physical fitness, Physiological cost of Household activities-		CO5

2		Acceptable workload (AWL), Principles of motion economy		
	2.3	Effect of Illumination/ Lighting on work environment, Thermal comfort and its impact on work efficiency.		CO5
	2.4	Effect of air pollution, Effect of Noise on Environment, effect of music on productivity and well- being.		CO5
	2.5	Vibrations and its effect on body parts during work with body parts, Psycho-social environment.		CO5
Design consideration for workstation/ tools/ equipment				
3	3.1	Hazards of ill designed workstation, Ergonomic factors considered while designing workplaces, ergonomic / work triangle.	10	CO6
	3.2	Ergonomic consideration for the physically challenged workers with disabilities and for barrier free designs.		CO6
	3.3	Design consideration for tools/ equipment in various work stations.		CO4
Practical				
4	4.1	Identifying the types of postures assumed during work, Analysis and interpretation of the results.	30	CO3
	4.2	Calculation of minimum space required for selected activities. Anthropometric Measurements for various work postures.		CO2
	4.3	Study few commonly used tools and equipment on the basis of their shape, size length etc. in saving time, human energy and fatigue		CO5
	4.4	Determination of maximum and comfortable working heights in horizontal and vertical plane		CO4
	4.5	Study a few commonly used tools and equipment on the basis of their shape, size, length etc. to save time, human energy and fatigue. Modify and design minor manual gadgets for optimizing work.		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room teaching, Field visits, Exhibition etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation(25 marks)

ii) Record (10 marks)

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	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Advanced Nutrition II**					
Type of Course	**DCE**					
Course Code	**MG8DCEHSC402**					
Course Level	**400-499**					
Course Summary	This advanced course in nutrition will explore the nutritional and biochemical roles/aspects of micronutrients and water. The study of micronutrients will extend beyond the fundamentals of nutrition and provides an integrated overview of the physiological requirements and functions of fat-soluble vitamins, water-soluble vitamins micro minerals and will include its relevance to human health and disease.					
Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		45+30 = 75
Pre-requisites, if any	Basic nutrition and biochemical understanding are prerequisites for this advanced course exploring the roles of micronutrients and water in human health and disease.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Summarise physiological and metabolic role of water	U	1
2	Outline digestion and assimilation, deficiency and toxicity of macro minerals	U	1
3	Explain the functions, sources, deficiency and toxicity of micro minerals and nutritional requirements through life cycle	A	3

4	Analyze the role of fat-soluble vitamins in maintaining various aspects of health, such as vision, bone health, and immune function	An	10
5	Explain the role of water-soluble vitamins in the body and their functions.	U	4
6	Develop competence in the scientific foundation of nutrition and dietetics practice and research	A	10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Water & Macro Minerals			**13**	
1	1.1	Distribution of water, functions, requirements, sources, water balance and its regulation	2	CO 1
	1.2	Importance of hydration	1	CO 1
	1.3	Assessment of hydration Status- common indices	1	CO 1
	1.4	Hazards of hypo and hyper hydration	1	CO 1
	1.5	Calcium-Distribution, absorption and utilization, sources, requirement, deficiency and toxicity, Hypocalcemia and Hypercalcemia	3	CO 2
	1.6	Phosphorus-Distribution, absorption and utilization, sources, requirement, deficiency and toxicity, calcium - phosphorus ratio.	3	CO 2
	1.7	Magnesium, Sulphur, Chorine, Sodium and Potassium- Functions, sources, requirement, deficiency and toxicity.	2	CO 2
Micro Minerals			**10**	
2	2.1	Iron -Distribution, absorption, metabolism, transport and utilization, sources, requirement, deficiency, assessment of iron nutritional status, methods of assessing iron availability, effect of excess iron retention and deficiency	4	CO 3
	2.2	Iodine, Fluorine and Zinc -Metabolism, functions, sources, requirements, deficiency, assessment of nutritional status and toxicity.	3	CO 3
	2.3	Trace elements - Physiology, function, sources, deficiency and toxicity of cobalt, copper, molybdenum, manganese and selenium,	3	CO 3

Fat Soluble and Water Soluble Vitamins			**22**	
3	3.1	Vitamins -Introduction	1	CO 4
	3.2	Fat soluble vitamins -Free radicals and antioxidants	6	CO 4
	3.3	Vitamin A, D, E and K - Chemistry, physiological functions, absorption, transport, utilization, storage, excretion and methods of assay, Dietary sources and losses in preparation and recommended intakes, human deficiency and diagnosis, hyper vitaminosis, antivitamins	6	CO 4
	3.4	Ascorbic Acid- Sources, absorption, transport, functions, deficiency and requirements	2	CO 5
	3.5	Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, Cyanocobalamine Physiological action, sources, functions, deficiency, requirements	5	CO 5
	3.6	Pantothenic acid and biotin- Sources, functions, deficiency	2	CO 5
Practical			**30**	
4	4.1	Nutrient Estimation of the following in various food samples: Calcium	10	CO 6
	4.2	Iron	5	CO 6
	4.3	Phosphorus	8	CO 6
	4.4	Vitamin C	7	CO 6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Bamji M.S., Krishnaswamy K. and Brahman G.N.V.(2017) . Textbook of Human Nutrition, 4th Edition, Oxford & Ibh Publishing.

2. Chander S.and Woodhead V.(2011). Public Health Nutrition in Developing Countries , Part I & II , Woodhead Publishing India.

3. Gibney M.J., MacDonald I.A. and Roche H.M. (2003). Nutrition and Metabolism, First Edition, The Nutrition Society Textbook Series, Blackwell Publishing .

4. Groff, J.L. and Gropper, S.S.(2016). Advanced Nutrition and Human Metabolism, Seventh Edition, Wadsworth Publishing Company.

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1. Gibney, M.J., Lanham- New, S.A.,Cassidey,A. and Vorster H.H.(2009). Introduction to Human Nutrition, Second Edition, The Nutrition Society Textbook Series, Blackwell Publishing.

2. ICMR, (2010). Nutrient Requirements And Recommended Dietary Allowances For Indians A Report of the Expert Group of the Indian Council Of Medical Research.

3. Kohlmeir, M. (2015) . Nutrient metabolism, Second Edition, Elsevier Ltd.

4. Medeiros, D.M. and Wildman, E.C. (2019). Advanced Human Nutrition, Fourth Edition, Jones and Bartlett learning.

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Environment and Human Resource Management**
Type of Course	**DCE**
Course Code	**MG8DCEHSC403**
Course Level	**400-499**
Course Summary	This course is designed to provide students with a comprehensive understanding of the intersection between environmental sustainability and human resource management. It explores the dynamic relationship between organizations, their employees, and the natural environment, emphasizing the role of HRM in fostering sustainable business practices.

Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1	-	45+30
Pre-requisites, if any	Basic understanding of resource management and interest in environmental issues					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcomes	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	To understand management theory and principles	U	1,2
2	Analyze the role of communication, leadership and motivation	An	4,10
3	Understand the significance of renewable energy resources	U	6,7
4	To Evaluate the environmental problems and to develop civic consciousness towards environmental concerns	U	1,7
5	To develop and appreciation towards environment and management concepts	Ap	7,10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Significance of Resource Management and Managerial Decision Making				
1	1.1	Management process: Planning - Types and Dimensions; Planning in a systems perspective, Factors affecting planning; Implementation-Controlling, Checking and Adjusting; Evaluation.	15	CO1
	1.2	Systems Approach to Management. Henri Fayol's Principles of management;		CO1
	1.3	Levels of management. Management by Objectives (MBO): meaning, features, scopes, Total Quality Management (TQM): Objectives, components and significance		CO1
	1.4	Concept, Steps, types, Stages and Techniques of decision making; Creativity; Rationality and Risk and Certainty.: Methods of resolving conflicts-Dominance, submission, compromise, conversion, integration		CO1
Essentials in Management				
2	2.1	Communication- Meaning, Significance, Recent trends in communication ICT tools-print and electronic media, email, internet, uses of multimedia, mobile phone, video and teleconferencing, web technology, tech talks and information kiosks. Barriers of communication.	**15**	CO2
	2.2	Leadership-Importance, Characteristics and styles , quality of a leaders Trait theory of leadership , Behavioral theory of leadership		CO2
	2.3	Motivation - Importance, theories-Maslow's theory, Herzberg's Motivation Hygiene Model, Key elements of motivation.		CO2
Energy Conservation and Environment Management				
3	3.1	Energy resources: types-renewable and non-renewable, need and importance of renewable energy resources;		CO3

		Sources and Devices: Photovoltaic cell, solar water heaters, Solar cooker, dryer Rainwater harvesting; Wind mill, bio-mass plants — working principles, application, advantages and limitations. Energy conservation techniques.	**15**	
	3.2	Environmental education and awareness, environment problem-ozone depletion, global warming, climate change, current environmental issues in India. Waste management-Definition, classification, segregation, Pollution: types-Land, water and air- causes and effects, control measures- global warming, acid rain and ozone layer depletion, Sound Pollution-Hazards and control measures; Wastemanagement-6Rs,methodsof disposal-dumping, composting, vermi- compost, bio gas plants, incineration; Greywater Treatment; e-waste management. Soak pit- its construction and functioning; Role of organic pesticides and fertilizers in environmental sustainability; Green Protocol; Carbon Foot Print.		CO4
Practical-Application of management principles and ecofriendly practices				
4	4.1	Plan an event incorporating management process, Study on recent trend in Communication	**30**	CO5
	4.2	Visit to renewable energy centre /rain water harvesting unit. Use solar dryer and cookers and prepare dried products and prepare leaflets to popularise these devices		
	4.3	Study on waste segregation and management practices in rural/urban areas Prepare organic pesticide/insecticide/fertilizer Prepare a decorative or functional product from waste material		
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory : 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Paneerselvam and Mohana Ramakrishnan (2007), Environmental Science Education.
2. Dr. Chhabra T.N, Principles and Practice of Management, Dhanpat Rai & co.(P) Ltd,1710,Nai Sarak, Delhi.
3. Abbasi, S.A and Abbasi, N (2001) Renewable Energy Resources and their
4. Environmental Impact, Prentice Hall of India Pvt. Ltd., New Delhi.
5. Ahluwalia. V.K. and Sunita Malhotra (2006),Environmental Science. Ane Books Pvt
6. Ltd New Delhi.
7. Chauhan D.S& Srivastava S.K (2010)Non-conventional Energy Reources, New Age
8. International (P)Ltd, New Delhi.
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12. Harold Koontz, Heinz Weihrich (2014) Principles of Management, Mcgraw hill
13. Education Pvt Ltd New Delhi.

SUGESTED READINGS

1. JeffersonW.Testeret.al.(2009)SustainableEnergy,PHIlearningPvt.Ltd.,New Delhi.
2. N.Manivasakam(2010)EnvironmentalPollution,NationalBookTrustIndia,New Delhi.
3. Nambiar,R.K(2007),TextbookofEnvironmentalStudies,SCITECHPublication (India)Pvt.Ltd, Chennai.
4. P.C. Varghese (2013) Building construction, PHI learning Delhi

	Mahatma Gandhi University **Kottayam**

Programme	**BSc (Hons) Home Science**					
Course Name	**Functional Foods and Nutraceuticals**					
Type of Course	**DCE**					
Course Code	**MG8DCEHSC404**					
Course Level	**400 - 499**					
Course Summary	The course aims to discuss several classes of functional foods and nutraceuticals and to explore the concept of bioactive compounds and their impact on health. It also provides students with a comprehensive understanding of functional ingredients encompassing scientific principles, health benefits, regulatory aspects, and practical applications.					
Semester	VIII	Credits			4	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		45+30=75
Pre-requisites, if any	Knowledge on food science, nutrition and dietetics					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Explain the functions of nutraceuticals and functional foods for the treatment of various disorders.	U	1,2, 4
2	Examine the importance of probiotics and prebiotics in human health	An	1,2, 4
3	Relate the various concepts, classification of nutraceuticals and the active components of various nutraceutical ingredients.	An	1,2, 4,9
4	Justify the principle of nutraeuticals in controlling life style diseases.	E	1,2, 4,9
5	Recognize the marketing and regulatory aspects of nutraceuticals and functional foods	U	1,2,4, 9
6	Gain skills in developing functional food products, their sensory attributes and potential health benefits.	S	1,2, 8,9,10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO No.
Introduction to Nutraceuticals and Functional Foods - Probiotics and Prebiotics				
1	1.1	Inter relationship of food, nutrients and health. Bioactive compounds in foods. Definition of functional and traditional foods, designer foods, pharma foods and FOSHU foods. An overview of Nutraceuticals and Nutrigenomics.	**20**	CO1
	1.2	History of functional foods, components of functional foods, stages involved in development of functional foods. Types of Functional Foods.		CO1
	1.3	Concept of free radical and antioxidant. Increasing role of Nutraceuticals in management of health and diseases.		CO1
	1.4	Human gastrointestinal tract and its microbiota		CO2
	1.5	Prebiotics - Definition, role of prebiotic as functional ingredient, examples.		CO2
	1.6	Probiotics - Definition, role of prebiotic as functional ingredient, examples.		CO2
	1.7	Synbiotics - Definition, role of prebiotic as functional ingredient, examples.		CO2
	1.8	Role of : Polyphenols: Flavonoids, catechins, isoflavones, tannins Phytoestrogens and Phytosterols Pigments: Lycopene, Curcumin Organo sulphur compounds		CO2
Nutraceuticals				
2	2.1	Classification and Sources of Nutraceuticals Relation of Nutraceutical Science with other Sciences: Medicine, Human physiology, genetics, food technology, chemistry and nutrition	10	CO3
	2.2	Plant Based Nutraceuticals: Glucosamine, Octacosanol, Carnitine, Melatonin and Ornithine alpha ketoglutarate, Chlorophyll, Caffeine, Green tea, Lecithin, soybean		CO3
	2.3	Fruit based nutraceuticals: grape products, Lycopene, carotene, proanthocyanidins.		CO3
	2.4	Animal and Algae based nutraceuticals		CO3
	2.5	Novel nutraceutical ingredients.		CO3

Food as remedies & Regulatory aspects				
3	3.1	Nutrigenomic links to chronic diseases. Nutraceuticals bridging the gap between food and drug.	15	CO4
	3.2	Nutraceuticals for Mental Health, Arthritis and Osteoporosis		CO4
	3.3	Nutraceuticals Remedies for cancer, heart disease, diabetes		CO4
	3.4	Nutraceutical Remedies for Digestive Disorders (Ulcer, Liver disorders, Lactose Intolerance, Celiac Disease) and Circulatory System		CO4
	3.5	International and national regulatory aspects of functional foods in India, ICMR guidelines for Probiotics.		CO5
	3.6	Development of biomarkers to indicate the efficacy of functional ingredients. Research frontiers in functional foods.		CO5
Practical				
4	4.1	Market survey of existing healthy probiotic foods	**30**	CO6
	4.2	Development of protein enriched foods as a functional food		CO6
	4.3	Production of functional food for diabetic and CVD patients		CO6
	4.4	Production of functional food for cancer patient		CO6
	4.5	Fortify common food items with probiotics		CO6
	4.6	Assess the antioxidant level of different fruits or vegetables using DPPH radical scavenging activity.		CO6
	4.7	Demonstrate the preparation of different types of yogurt enriched with probiotics.		CO6
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A.Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B.End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory : 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks

i) Laboratory Evaluation (25 marks)
ii) Record (10 marks)

REFERENCES

1. Mahtab, S, Bamji, Kamala Krishnasamy, G.N.V. Brahmam, Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi, 2015.
2. Simopoulus, A.P. and Ordovas, K.J.M., 2004, Nutrigenetics and Nutrigenomics, Vol. 93, Karger, Switzerland.
3. Webb G.P (2006), Dietary Supplements and Functional Foods, Blackwell Publishing Ltd, New York.
4. Tamine. A (2005), Probiotic Dairy Products, Blackwell Publishing Ltd, United Kingdom.
5. USFDA regulations on functional foods

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1. Robert E.C. Wildman, Robert,Wildman, Taylor C, Handbook of Nutraceuticals and Functional Foods, Third Edition,Wallace,2002
2. Pathak Y. Handbook of Nutraceuticals; Ingredient, Formulations, and Applications. CRC Press, Taylor & Francis Group, London.
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5. Satinder Kaur Brar, Surinder Kaur and Gurpreet Singh Dhillon,Nutraceuticals Functional Foods,2014.
6. Giuseppe Mazza; Functional Foods: Biochemical and Processing Aspects, Volume 1; CRC Press
7. Robert E.C. Wildman; Handbook of Nutraceuticals and Functional Foods, Second Edition; CRC

	Mahatma Gandhi University **Kottayam**
Programme	**BSc (Hons) Home Science**
Course Name	**Food Chemistry**
Type of Course	**DCE**
Course Code	**MG8DCEHSC405**
Course Level	**400 – 499**
Course Summary	This course covers advanced principles of food science, characteristics and properties of food.

Semester	VIII	Credits			**4**	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	-	1		**45+30=75**
Pre-requisites, if any	Basic understanding of general chemistry or a background in biology with biochemistry, can be beneficial for understanding the biological processes involved in food composition.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
After the successful completion of the course the student should be able to:			
1	Understand the physio chemical changes that occur in food.	U	1
2	Understand the chemistry and explain properties of carbohydrate, protein and lipids in relation to cookery.	U	1
3	Acquire practical skills to understand the properties of food components.	A	1
4	Develop nutritious products with better properties.	A	10
Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)			

COURSE CONTENT

Module	Units	Course description	Hrs	CO NO
Physio- chemical properties of food				
1	1.1	Physical properties of water – role of water in food systems, bound water in food products, water activity in foods.	10	CO 1
	1.2	Colloidal systems in food- True solutions and colloids, types and properties of colloids.		CO 1
Chemistry of starch and sugar				
2	2.1	Starch: components and characteristics of food starches. Native and modified starches and their applications, effect of dry and moist heat on starch. Gel formation, factors affecting gelatinization, retrogradation, syneresis.	20	CO 2
	2.2	Food Polysaccharides: algal polysaccharides; seed gums, exudates gums, microbial polysaccharides.		CO 2
	2.3	Sugar and sugar products- Types of sugar used in cookery, stages of sugar cookery. Types of sweeteners. Crystallization of sugar and factors affecting. Types of candies.		CO 2
	2.4	Chemistry of milk sugar, non-enzymatic browning.		CO 2
Chemistry of Proteins				
3	3.1	Structure and composition, structure of proteins and forces involved in protein conformation.	15	CO 2
	3.2	Functional properties of proteins in foods.		CO 2
	3.3	Components of wheat protein and structure.		CO 2
	3.4	Gluten formation and factors affecting. Denaturation of protein and factors affecting. Egg white foam formation, stages and factors affecting.		CO 2
	3.5	Role of proteins in food products; Texturized vegetable protein, protein concentrates.		CO 2

Practical Session: Exploring the Chemistry of Culinary Ingredients.				
4		**Chemistry of Fats and oil, pectic substance, plant pigments, spices and condiments**	30	
	4.1	Fats and oil -Structure, composition and classification. Properties of lipids.		CO 2
	4.2	Hydrogenation, winterization, flavor reversion, smoking point, Rancidity-Types, Mechanism and prevention		CO 2
	4.3	Role of fat/oil in food products; Factors affecting fat absorption of foods. Fat substitutes.		CO 2
	4.4	Pectins, phenolic compounds, enzymatic browning in fruits and vegetables		CO 2
	4.5	Types of plant pigments, effect of acid and alkali.		CO 2
	4.6	Types and active principles of spices and condiments.		CO 2
5	**Teacher specific content** (This content will be evaluated internally) Practical session, Class room Teaching, Field visits etc.			

Mode of Assessment

	CLASSROOM PROCEDURE			
	Module		Mode of Transaction	
	1,2,3,4		Lecture, Demonstration and practical Assignments	
	Mode of assessment			
	A. Continuous Comprehensive Assessment (CCA)			
	Learning approach	Formative Assessment (FA)	Summative Assessment (SA)	Marks
	Lecture	In-class discussion/Group tutorial work		
		Assignment/oral presentations		
		Viva-voce/Interview		
			Test paper- I	
			Test paper- II/open book test/any other	
Total				**25**
	Practical	Observation of practical skills		
		Viva-voce/Oral Presentation		
			Record	
Total				**15**
	B. End Semester Examination			
	Written Examination			**50**
	Practical Examination			**35**

End Semester Examination

Theory: 50 Marks

i) Short answer type questions: Answer any 10 questions out of 12 (10x2=20)

ii) Short essay type questions: answer any 5 questions out of 7 (5x4=20)

iii) Essay type questions: Answer any I question out of 2 (1x10=10)

Practical: 35 Marks(Practical)

i) Laboratory Evaluation (25 marks)

ii) Record (10 marks)

REFERENCES

1. Bowers, J (1992): Food Theory and Applications, 2nd MacMillan Publishing Co., New York.
2. Charley, H (1982): Food Science, 2nd Edition, John Wiley & Sons, New York.
3. Khader V.(2001) Text book of Food Science and Technology, Published by Directorate of Knowledge Management in Agriculture Indian Council of Agricultural Research Krishi Anusandhan Bhavan-I, Pusa New Delhi.
4. Potter, N. and Hotchkiss, J.H (1996): Food Science, 5th Edition, CBS Publishers and Distributors, New Delhi.
5. Srilakshmi B., (2003), 'Food Science", New Age International.

SUGGESTED READINGS

1. Journal of Food Science
2. Advances in Food Research
3. Journal of Food Science and Technology
4. Cereal Science
5. Journal of Dairy Science
6. Peckham, G and Freeland-Graves, G.H (1979): Foundations of Food Preparation
7. Pomeranz, Y (1991): Functional Properties of Food Components, 2nd Edition, Academic Press, New York.

SUMMER INTERNSHIP

After the completion of the IV semester, the students may undergo a 15 days summer internship, apprenticeship or community outreach activities under any one of the following areas.

- Boutiques/Stitching Units
- Food Industry/Units
- Day-care Centers /Anganwadi
- NGO Centers /SOS Villages/Rehabilitation Centers
- Event Management Centers/ Hospitality Institutions
- Design software training Centers
- Interior Design Firms

The internship can be done individually or as a group of maximum 5 students. However, a report of the internship in duplicate should be submitted to the department to attain 2 credits as per the curriculum.

<table>
<tr><td rowspan="8">Assessment Types</td><td colspan="4">MODE OF ASSESSMENT</td></tr>
<tr><td colspan="4">A. Continuous Comprehensive Assessment (CCA)</td></tr>
<tr><td>Learning Approach</td><td>Formative Assessment (FA)</td><td>Summative Assessment (SA)</td><td>Marks</td></tr>
<tr><td rowspan="2">Internship</td><td colspan="2">Performance Appraisal from the Industry/Units</td><td>15</td></tr>
<tr><td colspan="2">Total</td><td>15</td></tr>
<tr><td colspan="4">B. Semester End Examination</td></tr>
<tr><td colspan="3">Exam Components</td><td>Marks</td></tr>
<tr><td colspan="3">Internship Report</td><td>25</td></tr>
<tr><td colspan="3">Viva-Voce</td><td>10</td></tr>
<tr><td colspan="3">Total</td><td>35</td></tr>
</table>

	Mahatma Gandhi University **Kottayam**
Programme	**B.Sc. Home Science**
Course Name	**Project Dissertation**
Type of Course	**PRJ**
Course Code	**MG8PRJHSC400**
Course Level	**400**
Course Summary	The internship aims to provide practical experience and insight into the actual operation of a textile industry specifically focusing on the export segment.

Semester	VIII	Credits			**12**	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		-	-	-	-	-
Pre-requisites, if any	A basic knowledge about the functions of a garment industry.					

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Identify a research problem.	U	2, 4, 6, 10
2	Collect critique knowledge from research literature reviews.	A	2, 4, 6, 10
3	Employ appropriate research design and associated methods rigorously.	A	2, 4, 6, 10
4	Operate research project in an ethical way and draw conclusions.	A	2, 4, 6, 10
5	Analyze the research in a scholarly manner appropriate to the disciplinary area.	An	2, 4, 6, 10

Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

COURSE CONTENT

Content for Classroom Transaction (Units)

Course Description	Hrs	CO No.
• An introductory synopsis on the research topic shall be submitted at the commencement of the semester. • Intermediate reports on the work in progress should be produced timely. • The final documentation along with the respective institution's certification shall be obtained to prove them genuine. • The work of the students will be supervised and assessed by the faculty members who will award the internal marks. • The report shall be typed on A4 size paper with 1-inch margins on all 4 sides in Times New Roman font with font size 12 and 1.5 line spacing and shall submit the report in triplicate. • The report shall have 5 chapters including introduction, review of literature, methodology, results & discussions and summary & conclusion ending with bibliography. • Use APA style guide for formatting the referencing system throughout the manuscript, the bibliography at the end of the work, formatting and labelling of all tables, and for the captions for all figures. • The dissertation project will be evaluated both internally and externally.	-	1, 2, 3, 4, 5

<table>
<tr><td rowspan="12">Assessment Types</td><td colspan="4">MODE OF ASSESSMENT</td></tr>
<tr><td colspan="4">A. Continuous Comprehensive Assessment (CCA)</td></tr>
<tr><td>Learning Approach</td><td>Formative Assessment (FA)</td><td>Summative Assessment (SA)</td><td>Marks</td></tr>
<tr><td rowspan="5">Dissertation</td><td>Relevance of Topic</td><td></td><td>10</td></tr>
<tr><td>Depth of Research</td><td></td><td>20</td></tr>
<tr><td>Punctuality</td><td></td><td>10</td></tr>
<tr><td></td><td>Final Report</td><td>20</td></tr>
<tr><td colspan="2">Total</td><td>60</td></tr>
<tr><td colspan="4">B. Semester End Examination</td></tr>
<tr><td colspan="3">Exam Components</td><td>Marks</td></tr>
<tr><td colspan="3">Relevance of The Topic and Analysis</td><td>30</td></tr>
<tr><td colspan="3">Review and Data Collection or Experiment</td><td>70</td></tr>
<tr><td colspan="3">Project Content and Presentation</td><td>30</td></tr>
<tr><td colspan="3">Project Viva</td><td>10</td></tr>
<tr><td colspan="3">Total</td><td>140</td></tr>
</table>

References

1. *Publication Manual of the American Psychological Association: The Official Guide to APA Style.* (2019). United States: American Psychological Association.

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