CMS COLLEGE KOTTAYAM

(*AUTONOMOUS*)

Affiliated to the Mahatma Gandhi University, Kottayam, Kerala

CURRICULUM FOR
UNDER GRADUATE PROGRAMME

BACHELOR OF SCIENCE IN
FAMILY AND COMMUNITY SCIENCE
(HOME SCIENCE)

UNDER CHOICE BASED CREDIT SYSTEM 2018
(With effect from 2018)

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(Home Science)

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Chairperson

Board of Studies

PREFACE

Family and Community Science(Home Science) has adopted an ecological approach in its curriculum that engages the student through teaching, research and extension.It has contributed a great deal towards national development by training students to take up leadership roles in extension and community outreach programs. The students are encouraged to develop a scientific temper. Familiarizing them with the use of newer technologies, methods in familyand community linkages and sustainable use of resources for human development are the hall mark of education in Family and Community Science(Home Science). As a discipline Family and Community Science (Home Science) integrates the ingredients of the sciences, social sciences and technology to facilitate the study of and enhance the quality of human life. Its approach is therefore inherently interdisciplinary. The education process in Family and Community Science(Home Science) underscores the importance of the individual's dynamic relationship with his/her family, community and society as a whole, as well as with the resources in the environment. Higher education learning in Home Science subjects provides students the opportunity to sharpen their capacities with a sense of social responsibility.

In contemporary times, Home Scientists promote capacity building of individuals and communities for social and economic empowerment. They train community women and youth from various strata of society for entrepreneurship. Many Home Scientists have done exceptionally well as entrepreneurs themselves. They do not remain job seekers but have also become job creators. They gain and provide employment in research organizations, food and textile industries, dietetic practice, education and child development domains, accreditation of green buildings, strategic planning and communication technologies. Keeping in view the growing aspirations of today's youth and the capacity of Home Science discipline to deliver, the present 3-year choice based credit system has been drawn up.

Years of national and international experience in the field has contributed to the wisdom that all the five windows of opportunity that Home Science offers be opened, i.e. Food and Nutrition, Human Development and Childhood Studies, Resource Management and Design Application, Development Communication and Extension and Fabric and Apparel Sciences. In this course, the students will learn the fundamental principles and foundations of all the five areas. They are expected to internalize the principle of a Home Scientist, that is, to give back to the community from which they draw, for sustainable development. This is a major contribution of Family and Community Science (Home Science) in both developed and developing societies.

CURRICULUM

GRADUATE PROGRAMME OUTCOMES (GPO)

At the completion of the Undergraduate Programme, the student will be able to accomplish the following outcomes:

GPO No.	Graduate Programme Outcomes
GPO.1	**Critical Thinking**: Take an informed and analytical approach to learning and demonstrate in-depth knowledge of the subject and give opinion(s) supported by logical reasoning that one have judged to be appropriate and understanding different approaches and using them
GPO.2	**Effective Communication:** Demonstrate proficiency in communicating competently in groups and organizations, competence in interpersonal communication; possess skills to effectively deliver formal and informal presentations to a variety of audiences in multiple contexts
GPO.3	**Social Interaction:** Foster social skills and peer interaction enabling them to make all people feel valued and respect their differences by being responsible citizens for creating a socially inclusive society
GPO.4	**Ethical Standards:** Recognize values such as justice, trust, equity, fairness, kindness and develop a commitment to meeting and upholding standards of ethical behavior in all walks of life and comprehending the moral dimensions of decisions and actions
GPO.5	**Environmental Consciousness:** Discern the issues of environmental contexts and engages in promoting values and attitudes that claim coexistence and sustainable living with reduced, minimal, or no harm upon ecosystems
GPO.6	**Lifelong Learning:** Acquire the skill to be an independent lifelong learner embracing real-time changes in the socio-technological context, promoting continuous development and improvement of the knowledge and skills needed for employment and personal fulfillment

PROGRAMME SPECIFIC OUTCOMES (PSO)

PSO No.	Intended Programme Specific Outcomes ***Upon completion of BSc. Family and Community Science (Home Science) Programme, the graduates will be able to:***	GPO No.
PSO-1	Understand the basic concepts of Human Physiology, biochemistry, microbiology, environment and Human rights.	1,6
PSO-2	Plan and prepare diet for healthy life style using the principles of Food Science and Nutrition.	1,6
PSO-3	Understand the principles and patterns of growth and development of humans from conception to old age and the role of family in development.	1,3
PSO-4	Acquire scientific skills in the management of resources and develop basic skills for career options in the fields of dietetics, interior designing, textiles and fashion designing and preschool education.	1,4
PSO-5	Appreciate the role of Family and Community Science (Home Science) extension in community development and to conduct effective extension education programmes through different media.	2,3,4,6
PSO-6	Apply the acquired conceptual knowledge of food quality assurance and sustainable waste management for holistic living	4,5
PSO-7	Use concepts, tools and techniques related to Chemistry and Zoology and its application in Family and Community Science (Home Science)	1,6
PSO-LG	Organize and deliver relevant applications of knowledge through effective written, verbal, graphical/virtual communications and internet productivity with people from diverse backgrounds.	1,3,4

PROGRAMME DESIGN

B. Sc. Family and Community Science (Home Science) PROGRAMME

The UG programme in Family and Community Science (Home Science)includes (a) Common Courses (b) Core Courses(c) Complementary Courses (d) Open Course (e) Choice based Course and 3Project work.No course shall carry more than 5 credits. The student shall select one Open course in Semester V offered by different departments in the same institution. The number of courses for the programme should contain 12 compulsory core courses, 1open course, and 1elective course from the frontier area of the core courses, 12 core practical courses, 1project work, 8 complementary courses and 2 complementary practical courses. There should be 10 common courses, or otherwise specified, which includes the first and second language of study. A student shall acquire minimum 120 credits for successfully completing this UG Programme.

Sl. No	Coursetype	No.of courses	Total credits
1	Common course I-English	6	22
2	Common course II– Additional language	4	16
3	Core	12	34
4	Core Practical	12	12
5	Complementary I	4	10
6	Complementary IPractical	4	04
7	Complementary II	4	10
8	Complementary IIPractical	4	04
9	Choice based Open course	1	3
10	Choice based elective	1	3
11	Project work	1	2
Total		**53**	**120**

PROGRAMME STRUCTURE –
B.SC. FAMILY AND COMMUNITY SCIENCE (HOME SCIENCE)
(Semester wise)

SEMESTER I					
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Total hours**	**Credits**
EN1811501	Fine-tune Your English	Common I - English 1	5	90	4
EN1811502	Pearls from the Deep	Common I - English 2	4	72	3
	Additional Language	Common Course	4	72	4
HN1811501	Prose and One Act Plays	Common II - Hindi 1			
ML1811501	*Kathasahithyam*	Common II - Malayalam 1			
SC1811501	Poetry/ Grammar & History of Syriac Language & Literature	Common II – Syriac 1			
HS1811101	Methodology of Home Science and Food Science	Core 1	2	36	2
HS1811601	Methodology of Home Science and Food Science	Core Practical 1	2	36	1
CH1811201	Basic Theoretical and analytical chemistry	Complementary 1 - chemistry	2	36	2
CH1811701	Volumetric analysis	Complementary 1– Chemistry Practical	2	36	1
ZY1811201	Non chordate diversity	Complementary 1 - Zoology	2	36	2
ZY1811701	Non chordate diversity	Complementary 1– Zoology Practical	2	36	1
		Total	**25**	**450**	**20**
SEMESTER II					
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Total hours**	**Credits**
EN1812503	Issues that Matter	Common I - English 3	5	90	4
EN1812504	Savouring the Classics	Common I - English 4	4	72	3
	Additional Language	Common Course	4	72	4
HN1812503	Short stories and Novel	Common II- Hindi 2			

ML1812504	*Kavitha*	Common II-Malayalam 2			
SC1812503	Poetry/ Grammar & History of Syriac Literature	Common II - Syriac 2			
HS1812102	Human Physiology & Micro Biology	Core 2	2	36	2
HS1812602	Human Physiology & Micro Biology	Core Practical 2	2	36	1
CH1812202	Basic Organic Chemistry	Complementary Chemistry 2	2	36	2
CH1812702	Volumetric analysis	Complementary Chemistry 2-Practical	2	36	1
ZY1812202	Chordate Diversity	Complementary Zoology 2	2	36	2
ZY1812702	Chordate Diversity	Complementary Zoology 2-Practical	2	36	1
		Total	**25**	**450**	**20**
SEMESTER III					
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Total hours**	**Credits**
EN1813505	Literature and/ as Identity	Common I - English 5	5	90	4
	Additional Language	Common Course	5	90	4
HN1813505	Poetry/Grammar and Translation	Common II-Hindi 3			
ML1813507	*Drishyakalasahithyam*	Common II-Malayalam 3			
SC1813505	Prose, Grammar & Literature	Common II-Syriac 3			
HS1813103	Human Development	Core 3	3	54	3
HS1813603	Human Development	Core Practical 3	2	36	1
CH1813203	Advanced Inorganic and Organic Chemistry	Complementary Chemistry 3	3	54	3
CH1813703	Organic analysis	Complementary Chemistry 3-Practical	2	36	1
ZY1813203	Physiology and Immunology	Complementary Zoology 3	3	54	3
ZY1813703	Physiology and Immunology	Complementary Zoology 3-Practical	2	36	1
		Total	**25**	**450**	**20**

SEMESTER IV					
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Total hours**	**Credits**
EN1814507	Illuminations	Common I - English 6	5	90	4
	Additional Language	Common Course	5	90	4
HN1814506	Drama and Long Poem	Common II- Hindi 4			
ML1814508	*Malayala Gadyarachanakal*	Common II- Malayalam 4			
SC1814506	Poetry, Grammar & Syriac Heritage in India	Common II- Syriac 4			
HS1814104	Family Dynamics	Core 4	3	54	3
HS1814604	Family Dynamics	Core Practical 4	2	36	1
CH1814204	Advanced Bio Organic Chemistry	Complementary Chemistry 4	3	54	3
CH1814704	Organic Analysis	Complementary Chemistry 4- Practical	2	36	1
ZY1814204	Applied Zoology	Complementary Zoology 4	3	54	3
ZY1814704	Applied Zoology	Complementary Zoology 4- Practical	2	36	1
		Total	**25**	**450**	**20**
SEMESTER V					
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Total hours**	**Credits**
HS1815105	Interior Decoration	Core 5	3	54	3
HS1815605	Interior Decoration	Core Practical 5	3	54	1
HS1815106	Human Nutrition and Biochemistry	Core 6	3	54	3
HS1815606	Human Nutrition and Biochemistry	Core Practical 6	2	36	1
HS1815107	Textile Science	Core 7	3	54	3
HS1815607	Textile Science	Core Practical 7	2	36	1
HS1815108	Environmental Studies For Community Living And Human Rights	Core 8	3	54	3
HS1815608	Environmental Studies For Community Living And Human Rights	Core Practical 8	2	36	1
HS1815303	Nutrition for wellness	Open Course	4	72	3
		Total	**25**	**450**	**19**

SEMESTER VI					
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Total hours**	**Credits**
HS1816109	Family Resource Management	Core 9	3	54	3
HS1816609	Family Resource Management	Core Practical 9	2	36	1
HS1816110	Clinical Nutrition and Dietetics	Core 10	3	54	3
HS1816610	Clinical Nutrition and Dietetics	Core Practical 10	3	54	1
HS1816111	Fashion Designing and Apparel Production	Core 11	3	54	3
HS1816611	Fashion Designing and Apparel Production	Core Practical 11	3	54	1
HS1816112	Extension Education and Communication	Core 12	3	54	3
HS1816612	Extension Education and Communication	Core Practical 12	2	36	1
HS1816306	Food Saftey	Choice Based Course (Elective)	3	54	3
HS1816801	Project work	Project	-	-	2
		Total	**25**	**450**	**21**

PROGRAMME STRUCTURE
B.Sc. Family and Community Science (Home Science)
(Category wise)
COMMON COURSES

Sl.No	Course Name		Credit	Hrs/ W	Semester
1	Common I -English 1 Fine-tune Your English		4	5	1
2	Common I- English 2 Pearls from the Deep		3	4	1
3	Common I -English 3 Issues that Matter		4	5	2
4	Common I- English 4 Savouring the Classics		3	4	2
5	Common I – English 5 Literature and/ as Identity		4	5	3
6	Common I – English 6 Illuminations		4	5	4
7	Additional language –1		4	4	1
	Prose and One Act Plays	Common II - Hindi 1			
	Kathasahithyam	Common II - Malayalam 1			
	Poetry/ Grammar & History of Syriac Language &Literature	Common II –Syriac 1			
8	Additional language –1		4	4	2
	Short stories and Novel	Common II - Hindi 2			
	Kavitha	Common II- Malayalam 2			
	Poetry/ Grammar & History of Syriac Literature	Common II –Syriac 2			
9	Additional Language - 1		4	5	3
	Poetry Grammar and Translation	Common II -Hindi 3			
	Drishyakalasahithyam	Common II-Malayalam 3			
	Prose, Grammar & Literature	Common II- Syriac 3			
10	Additional Language – 1		4	5	4
	Drama and Long Poem	Common II- Hindi 4			
	Malayala Gadyarachanakal	Common II-Malayalam 4			
	Poetry, Grammar & Syriac Heritage in India	Common II- Syriac 4			
Total			**38**	**46**	

CORE COURSES-THEORY

Sl.No	Course Name	Credit	Hrs/W	Semester
1	Methodology of Home Science and Food Science	2	2	I
2	Human Physiology and Microbiology	2	2	II
3	Human development	3	3	III
4	Family Dynamics	3	3	IV
5	Interior Decoration	3	3	V
6	Human Nutrition and Biochemistry	3	3	V
7	Textile Science	3	3	V
8	Environmental Studies for community living and Human Rights	3	3	V
9	Family Resource Management	3	3	VI
10	Clinical Nutrition and Dietetics	3	3	VI
11	Fashion Designing and Apparel Production	3	3	VI
12	Extension Education and Communication	3	3	VI
Total		**34**	**34**	

CORE COURSES-PRACTICAL

Sl.No	Course Name	Credit	Hrs/W	Semester
1	Methodology of Home Science and Food Science	1	2	1
2	Human Physiology and Microbiology	1	2	2
3	Human development	1	2	3
4	Family Dynamics	1	2	4
5	Interior Decoration	1	3	5
6	Human Nutrition and Biochemistry	1	2	5
7	Textile Science	1	2	5
8	Environmental Studies for community living and Human Rights	1	2	5
9	Family Resource Management	1	2	6
10	Clinical Nutrition and Dietetics	1	3	6
11	Fashion Designing and Apparel Production	1	3	6
12	Extension Education and Communication	1	2	6
Total		**12**	27	

COMPLEMENTARY COURSES- THEORY

Sl.No	Course Name	Credit	Hrs/W	Semester
1	Basic Theoretical and analytical chemistry	2	2	1
2	Non chordate diversity	2	2	1
3	Basic Organic Chemistry	2	2	2
4	Chordate Diversity	2	2	2
5	Advanced Inorganic and Organic Chemistry	3	3	3
6	Physiology and Immunology	3	3	3
7	Advanced Bio Organic Chemistry	3	3	4
8	Applied Zoology	3	3	4
Total		**20**	**20**	

COMPLEMENTARY COURSES- PRACTICAL

Sl.No	Course Name	Credit	Hrs/W	Semester
1	Volumetric analysis	1	2	1
2	Non chordate diversity	1	2	1
3	Volumetric analysis	1	2	2
4	Chordate Diversity	1	2	2
5	Organic analysis	1	2	3
6	Physiology and Immunology	1	2	3
7	Organic Analysis	1	2	4
8	Applied Zoology	1	2	4
Total		**08**	**16**	

OPEN COURSE - CHOICE BASED

Sl.No	Course Name	Credit	Hrs/Wk	Semester
1	Open Course – Nutrition for wellness	3	4	5

CHOICE CHOICE BASED- ELECTIVE

Sl.No	Course Name	Credit	Hrs/Wk	Semester
1	Food Saftey	3	3	6

EXTRA CREDIT COURSES

Sl.No	Course Name	Credit
1	Early Childhood Care	2

ADD-ON COURSES

Sl.No	Course Name	Credit
1	Certificate Course in Fashion Designing	2
2	Diploma Course In Fashion Designing	2
3	Advanced Diploma Course In Fashion Designing	2

DETAILED SYLLABUS OF THE COURSES

OFFERED BY THE DEPARTMENT

SEMESTER I				
Course Code	**Title of the Course**	**Course Category**	**Hours/ week**	**Credits**
EN1811501	Fine-tune Your English	Common I -English 1	5	4
EN1811502	Pearls from the Deep	Common I - English 2	4	3
	Additional Language	Common Course	4	4
HN1811501	Prose and One Act Plays	Common II - Hindi 1		
ML1811501	*Kathasahithyam*	Common II - Malayalam 1		
SC1811501	Poetry/ Grammar & History of Syriac Language & Literature	Common II –Syriac 1		
HS1811101	Methodology of Home Science and Food Science	Core 1	2	2
HS1811601	Methodology of Home Science and Food Science	Core Practical 1	2	1
CH1811201	Basic Theoretical and analytical chemistry	Complementary 1 - chemistry	2	2
CH1811701	Volumetric analysis	Complementary 1– Chemistry Practical	2	1
ZY1811201	Non chordate diversity	Complementary 1 - Zoology	2	2
ZY1811701	Non chordate diversity	Complementary 1– Zoology Practical	2	1
		Total	**25**	**20**

Course	Details				
Code	HS1811101				
Title	**METHODOLOGY OF HOME SCIENCE & FOOD SCIENCE**				
Degree	B.Sc.				
Branch(s)	**Family and Community Science(Home Science)**				
Year/Semester	1/I				
Type	CORE 1 THEORY				
Credits	2	Hr/ Week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Identify thrust areas in Family and Community Science (Home Science) and consider career prospects.	R	1
2	Select appropriate methodology for undertaking research oriented projects.	Ap,E	1
3	Compose a report in the approved format for a research project.	C	1
4	Identify different food groups and their functions.	R	2
5	Formulate different recipes using different cooking methods.	C,An	2
6	Compare the different techniques available for preparation and preservation of foods.	E,An	2

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	**Methodology of Home Science**	**6**	**1,2,3**
1.1	**a. A.Concept and Scope of Home Science**		
1.1.1	Areas of Home Science – Human Development	1	1
1.1.2	Nutrition and Dietetics,	1	1
1.1.3	Textile Science and Fashion Designing	1	1
1.1.4	Family Resource Management	1	1
1.1.5	Extension Education	1	1
1.1.6	Thrust Areas of Research in Home Science	1	1
1.2	**Research project**		2
1.2.1	Types- survey and experimental. Selection of research topic.	1	2
1.2.2	Research trends in Home Science Tools for data collection- check list, rating scale, questionnaire, and Interview schedule.	1	2
.1.2.3	Sampling techniques – definition, types –Random sampling- simple & systemic random sampling	1	2
1.2.4	Non- random sampling- purposive, stratified, Convenience and snow ball sampling.	1	2
1.2.5	Tabulation – definition, parts of a table. Graphic presentation- line, bar, pie, pictograph.	1	2
1.2.6	Components of a project report – Introduction, Review, Methodology, Results and Discussion, Summary and Conclusion in brief, References	1	3
2.0	**Food groups and Food preparation**	6	4
2.1	Food groups: Functions of foods, food groups (Basic food group system – (ICMR)	1	4
2.2	a.Food preparation: Objectives, Methods of cooking- moist heat, dry heat and combination methods, merits and demerits of each methods.	2	4
2.3	b.Food preservation -Principles and Methods	1	5,6
2.4	c.Developments in the field of food science, Basic concepts of Genetically modified foods, Organic foods, Functional foods, probiotic and pre-biotic foods	2	1
3.0	**Study of macronutrients in foods**	6	4
3.1	a.Carbohydrates -Definition, composition, classification, starch - structure of starch granules, effect of cooking,gelatinisation, factors affecting, basic concepts of gelation, retro gradation, dextrinization Sugar cookery and its applications. Carbohydrates in food preparation.	. 2	4
3.2	b.Proteins -Structure, classification based on function(complete, partially complete, incomplete), classification of amino acids(essential &non essential) denaturation, food proteins- plant,		

	animal proteins, on traditional proteins- single cell(yeast), leaf proteins (spirulina), textured vegetable protein(soya).	2	4
3.3	c.Lipids -Definition, composition, classification. Lipids in foods (visible and invisible), fatty acids(saturated, unsaturated, essential), rancidity- types, factors leading to rancidity, prevention, hydrogenation, applications of lipids in food preparations	2	4
4.0	Study of Plant Foods	11	4
4.1	a.Cereals -Structure, composition and nutritive value, cereal- pulse combination, common cereals and millets in India. gluten formation, factors affecting gluten formation, Parboiling- merits and demerits	3	4
4.2	b.Pulses-Nutritive value and composition, germination, fermentation, advantages, anti nutritional factors (trypsin inhibitors, lathyrism). Important pulses in India.	2	4
4.3	c.Vegetables and fruits -Classification, composition and nutritive value, pigments, effects of acid and alkali, enzymatic and non- enzymatic browning, methods of prevention.	2	4,6
4.4	Flavour components- organic acids and enzymes, changes in fruit during ripening, antioxidant role of fruits and vegetables.	2	4
4.5	d.Nuts and Oilseeds-Nutritive value, common nuts and oilseeds, aflatoxins	1	4
4.6	e.Spices -Major spices of India. Health benefits of spices.	1	4
5.0	Study of animal foods	9	4
5.1	a.Milk and milk products - Composition and nutritive value, pasteurisation, homogenisation,advantages.	2	4
5.2	Types of milk and milk products (whey proteins, skim milk, evaporated , condensed, dry milk, khoa, ice cream, toned milk,flavoured milk, fermented milk, butter, cheese, curd).	2	4,6
5.3	Egg - Structure, composition and nutritive value, deterioration in egg quality, evaluation of egg quality, egg white foam,stages, factors affecting foaming, culinary role of eggs, designer eggs.	2	5
5.4	Meat & Poultry- Structure of meat, composition and nutritive value, rigor mortis, effect of cooking on meat, types of meat and meat products.	2	5
5.5	b.Fish - Classification, types, composition and nutritive value, fish spoilage and preservation, fish products.	1	5,6

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Course	Details				
Code	HS1811601				
Title	METHODOLOGY OF HOME SCIENCE AND FOOD SCIENCE				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	1/I				
Type	CORE-PRACTICAL 1				
Credits	1	Hrs/ week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Prepare scientific tools appropriate for different research projects.	C	1
2	Choose suitable methods for data presentation in a research project.	E,An	1
3	Compare components of commercially available food stuffs against claims presented by the manufacturer.	E,Ap	4
4	Understand the effect of different cooking methods on the quality of foods..	U,An	4
5	Understand the different stages of cookery of common foods.	U	2
6	Apply various methods to prevent food spoilage in homes.	C,Ap	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Preparation of a sample check list, rating scale, questionnaire, and Interview schedule related to any area of Family and Community Science (Home Science)	5	1
2	Select appropriate data from the subject related topic and prepare a sample line, bar, pie diagrams	3	2
3	Evaluation of gluten content in a cereal flour	5	3
4	Stages of egg white foam formation	3	5
5	Stages of sugar cookery.	3	5
6	Gelatinization temperatures of various types of starches.	4	4
7	Effect of cooking on vegetable pigments.	4	4
8	Enzymatic and Non-enzymatic browning, Methods to prevent browning in fruits.	4	4,6
9	Food preservation methods- preparation of jams, jelly and squash	5	6

SEMESTER II				
Course Code	**Title of the Course**	**Course Category**	**Hours/week**	**Credits**
EN1812503	Issues that Matter	Common I - English 3	5	4
EN1812504	Savouring the Classics	Common I -English 4	4	3
	Additional Language	Common Course	4	4
HN1812503	Short stories and Novel	Common II- Hindi 2		
ML1812504	*Kavitha*	Common II- Malayalam 2		
SC1812503	Poetry/ Grammar & History of Syriac Literature	Common II -Syriac 2		
HS1812102	Human Physiology & Micro Biology	Core 2	2	2
HS1812602	Human Physiology & Micro Biology	Core Practical 2	2	1
CH1812202	Basic Organic Chemistry	Complementary Chemistry 2	2	2
CH1812702	Volumetric analysis	Complementary Chemistry 2- Practical	2	1
ZY1812202	Chordate Diversity	Complementary Zoology 2	2	2
ZY1812702	Chordate Diversity	Complementary Zoology 2- Practical	2	1
		Total	**25**	**20**

Course	Details				
Code	HS1812102				
Title	HUMAN PHYSIOLOGY & MICROBIOLOGY				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	1/II				
Type	CORE COURSE 2 THEORY				
Credits	2	Hrs/week	2	Total hours	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Describe the working of various organ systems in the human body.	R	1
2	Explain digestion and absorption of various nutrients in the body.	U	1
3	Compare the action of different hormones and the effect of their imbalances.	An,E	1
4	Understand the basic concepts of microbiology.	U	1
5	Explain the different defence mechanisms in the body.	U,R	4
6	Prepare commercially important products from beneficial microorganisms.	C,Ap	1

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Respiratory and Cardiovascular System	7	1
1.1	Structure of respiratory system, hypoxia, lung volume and capacities.	2	1
1.2	Composition and functions of blood, Haemoglobin.	1	1
1.3	Coagulation of blood, Blood groups.	1	1
1.4	Structure of heart, Circulation (Systemic, pulmonary, coronary and portal system)	1	1
1.5	Cardiac cycle, Cardiac output, Blood pressure, Myocardial infarction.	2	1
2.0	Digestive and Excretory System	7	1,2

2.1	Structure and functions of GI tract	1	1
2.2	Digestion and absorption of CHO, protien and fats.	2	2
2.3	Liver, Gallbladder, Pancreas, function and regulation of gastric intestinal secretion.	2	2
2.4	Structure and function of kidney, Nephron, Mechanism of Urine formation	2	1
3.0	Endocrine and Reproductive System	7	1,3
3.1	Endocrine glands and hormones in brief,	2	3
3.2	Action and disorder of pituitary, thyroid, Adrenal and pancreatic hormones.	2	3
3.3	Structure of uterus, ovary, ovary gland (hormones) and their functions	2	1,3
3.4	Ovary gland (hormones) and their functions	1	3
4.0	Basic concepts of Microbiology	8	4
4.1	Classification of microorganisms	2	4
4.2	Important microorganisms- Structure and economic importance of microorganism-bacteria, yeast.	2	4
4.3	Factors affecting the growth of micro organisms, Culture media and culture techniques,	2	4
4.4	Isolation and identification, grams staining.	2	4
5.0	Infection and Immunity	7	5,6
5.1	Sources of microorganisms, Transmission of infection	2	5
5.2	Bacterial infections in man- typhoid, Pneumonia.	2	5
5.3	Viral infections – Hepatitis, AIDS.	1	5
5.4	Natural defences of the body—primary and secondary defence mechanisms	1	6
5.5	Immunity types, Immunization followed for various diseases, allergy. Hypersensitivity	1	6

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- Anathanarayan,R and Panicker C.K.J, Text book of Microbiology,8 th edition 2009 Universities Press (India) pvt. Ltd., New Delhi.
- James.M.Jay (1986) Modern Food Microbiology,3rd edition,Van Nostrand,New York.
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- Guyton: Medical Physiology
- C.C.Chatterjee: Human Physiology,Vol I and II

Course	Details				
Code	HS1812602				
Title	HUMAN PHYSIOLOGYAND MICROBIOLOGY				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	1/II				
Type	CORE COURSE 2-PRACTICAL				
Credits	1	Hrs/week	2	Total hours	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Identify microorganisms in a laboratory setting	U	1
2	Formulate and market food products using economically important microorganisms	Ap,C	2
3	Assess body health parameters such as blood pressure at home	Ap,E	3
4	Understand the working conditions in a food quality / microbiology laboratory and consider career prospects for the same	E,U	6

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Staining techniques for gram positive and negative bacteria	4	1
2	1.Fermentation- Preparation of wine and curd	8	2
3	2.Identification of microorganisms by gram staining	8	1
4	3.Assessment of Blood pressure.	8	3
5	4.Field Project-visit to a diagnostic laboratory/Microbiology lab(ST)	8	4

SEMESTER III				
Course Code	**Title of the Course**	**Course Category**	**Hours/ week**	**Credits**
EN1813505	Literature and/ as Identity	Common I - English 5	5	4
	Additional Language	Common Course	5	4
HN1813505	Poetry/Grammar and Translation	Common II-Hindi 3		
ML1813507	*Drishyakalasahithyam*	Common II-Malayalam 3		
SC1813505	Prose, Grammar & Literature	Common II-Syriac 3		
HS1813103	Human Development	Core 3	3	**3**
HS1813603	Human Development	Core Practical 3	2	**1**
CH1813203	Advanced Inorganic and Organic Chemistry	Complementary Chemistry 3	3	**3**
CH1813703	Organic analysis	Complementary Chemistry 3-Practical	2	**1**
ZY1813203	Physiology and Immunology	Complementary Zoology 3	3	**3**
ZY1813703	Physiology and Immunology	Complementary Zoology 3-Practical	2	**1**
		Total	**25**	**20**

Course	Details				
Code	HS1813103				
Title	**HUMAN DEVELOPMENT**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	2/III				
Type	CORE COURSE 3 THEORY				
Credits	3	Hrs/week	3	Total Hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Assess the physical, motor, emotional, intellectual and social development of a pre-school child.	E,Ap	3
2	Develop materials to enhance overall development of a child	C	3
3	Understand the pattern involved in the growth and development of a child from infancy to adulthood.	U	3
4	Monitor progress in physical growth of children with the help of standardised tools	An,E	3
5	Preparation of visual aids for effective communication of messages related to child care.	C,Ap	4,5

Module	Course Description	Hrs	CO.No.
1.0	Introduction to Human development	8	
1.1	Human development- significance & Scope	1	1
1.2	Methods of child study – Anthropometry, observation, interview, questionnaire, case study , projective techniques, psychological tests, sociometry, longitudinal & cross sectional approach.	3	2
1.3	Growth & development – Definition, principles, stages, areas, factors influencing, heredity – environment interaction.	2	3
1.4	Personality development – definition, types, determinants of personality	2	5
2.0	Pre - natal development & Neonate	15	
2.1	A)Prenatal development – conception, stages, factors influencing, complications / hazards during pregnancy, prenatal care, child birth.	6	2
2.2	Neonate- definition, physical characteristics, abilities, adjustments, New born care – Feeding,		

	immunization, health assessment using growth chart, baby friendly Hospitals. APGAR test, at risk babies.	7	2
2.3	Needs and rights of children	2	7
3.0	Development during childhood	15	
3.1	Infancy-Physical, motor, intellectual, emotional, social & language development . Factors influencing.	3	2
3.2	Babyhood-Physical, motor, intellectual, emotional, social & language development . Factors influencing.	3	2
3.3	Early childhood-Physical, motor, intellectual, emotional, social & language development . Factors influencing.	4	2
3.4	Late childhood. - Physical, motor, intellectual, emotional, social & language development , Factors influencing.	3	2
3.5	Play –Importance, types, selection of toys, indigenous toys	2	2
4.0	Development during Adolescence,	8	
4.1	Definition, characteristics, development during adolescence- physical, emotional, social and cognitive development,	2	2
4.2	Identity formation and identity crisis.	1	2
4.3	Different issues and concerns during adolescence (National and Global)- anorexia nervosa, bulimia, obesity, depression, suicidal behaviour, substance abuse, adolescent stress, peer pressure, adolescent pregnancy, personal problems.	2	4
4.4	Causes, consequences and management of each issues	3	4
5.0	Discipline & guidance for children	8	
5.1	Discipline- essentials, techniques and its effects on children.	3	6
5.2	Guidance -positive guidance and guidance techniques.	3	6
5.3	Habit formation- definition, principles.	2	6

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Course	Details				
Code	HS1813603				
Title	HUMAN DEVELOPMENT – PRACTICAL				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	2/III				
Type	CORE COURSE 3- PRACTICAL				
Credits	1	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes *Upon completion of this course, the students will be able to*:	Cognitive Level	PSO No.
1	Assess the physical, motor, emotional, intellectual and social development of a pre-school child.	E,Ap	3
2	Develop materials to enhance overall development of a child	C	3
3	Understand the pattern involved in the growth and development of a child from infancy to adulthood.	U	3
4	Monitor progress in physical growth of children with the help of standardised tools	An,E	3
5	Preparation of visual aids for effective communication of messages related to child care.	C,Ap	5

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	A project on the physical & motor, Intellectual, emotional and social development of a Pre-school child.	11	1
2	Preparation of growth enhancing material/ play materials/ toys for infants / toddlers/ Pre- school children.	10	2
3	Growth monitoring of a child below 5 years using growth chart.	5	3,4
4	Preparation of a brochure/ leaflet /folder/chart on any related topic in Hum development &Family interactions	5	5
5	Preparation of an illustrated album / a power point on any topic related to Human development.	5	5

SEMESTER IV				
Course Code	**Title of the Course**	**Course Category**	**Hours/ week**	**Credits**
EN1814507	Illuminations	Common I - English 6	5	4
	Additional Language	Common Course	5	4
HN1814506	Drama and Long Poem	Common II- Hindi 4		
ML1814508	*Malayala Gadyarachanakal*	Common II- Malayalam 4		
SC1814506	Poetry, Grammar & Syriac Heritage in India	Common II- Syriac 4		
HS1814104	Family Dynamics	Core 4	3	3
HS1814604	Family Dynamics	Core Practical 4	2	1
CH1814204	Advanced Bio Organic Chemistry	Complementary Chemistry 4	3	3
CH1814704	Organic Analysis	Complementary Chemistry 4- Practical	2	1
ZY1814204	Applied Zoology	Complementary Zoology 4	3	3
ZY1814704	Applied Zoology	Complementary Zoology 4- Practical	2	1
		Total	**25**	**20**

Course	Details				
Code	HS1814104				
Title	**FAMILY DYNAMICS**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	2/IV				
Type	CORE THEORY 4				
Credits	3	Hrs/ week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Summarise the different aspects of marriage and the factors leading to Successful marriage	U	3
2	Describe different aspects of family, family interactions and the current issues affecting family and Child Development	R	3
3	Identify the critical family situations and get equipped with coping strategies.	An	3
4	Understand the Needs & problems of the elderly and develop a positive attitude towards the care of the aged.	U	3

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Marriage	8	1
1.1	Definition, Functions, types.	2	1
1.2	Marital adjustment -Areas of Adjustment.	3	1
1.3	Factors leading to successful married life	3	1
2.0	Family and contemporary issues affecting family	12	1,2,3
2.1	Family- the basic social institution, functions of family. Types-Joint, Nuclear extended, lone-parent, reconstituted families.	, 4	1
2.2	Family Interactions (Husband –wife & parent –		

	child) and its influence on child development. Responsible parenthood.	4	1
2.3	Contemporary issues affecting family(India and Global)- maternal employment, Lone parenthood, reconstituted families, impact of electronic media on family	4	2,3
3.0	Critical family situations	20	3
3.1	Family Crisis - Meaning, and types - Death, divorce, desertion, suicide, prolonged illness, imprisonment, unemployment, dowry, alcoholism, drug addiction, war separation, economic depression.	10	3
3.2	Children with special needs-Definition, general classification, characteristics, general causes, role of family towards children with special needs.	7	2
3.3	Children with Behaviour problems- definition, causes , methods of handling	3	2
4.0	Population education	7	
4.1	Definition. Overpopulation – definition & its problems.	4	2
4.2	Methods of family planning.	2	2
4.3	Sex education	2	2
5.0	Old age	7	4
5.1	Physical & psychological changes during old age.	4	4
5.2	Needs, problems of the elderly.	2	4
5.3	Care of the aged.	2	4

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Course	Details				
Code	HS1814604				
Title	**FAMILY DYNAMICS**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	2/IV				
Type	CORE IV PRACTICAL				
Credits	1	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Understand the problems related to old age and develop a sense of responsibility towards destitute and elderly.	U,R	3
2	Interact with the neglected population and develop a sense of		
3	Responsibility towards the society as a whole.	U	3
4	Prepare visual aids to create awareness on topics related to family living	C,Ap	5
5	Create technologically advanced tools for interaction and dissemination of information.	C,Ap	5

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Visit to an Old age Home/ pakal veedu and interact with the inmates to assess their (problems / interests/ desires) and report.	8	1
2	A project on the characteristics of a child with any behavior problem. /Child with special needs.	8	5
3	Preparation of a brochure/ leaflet /folder/chart on any topic related to familyDynamics	10	3
4	Preparation of a power point presentation on any related topic of your study	10	4

SEMESTER V				
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Credits**
HS1815105	Interior Decoration	Core 5	3	3
HS1815605	Interior Decoration	Core Practical 5	3	1
HS1815106	Human Nutrition and Biochemistry	Core 6	3	3
HS1815606	Human Nutrition and Biochemistry	Core Practical 6	2	1
HS1815107	Textile Science	Core 7	3	3
HS1815607	Textile Science	Core Practical 7	2	1
HS1815108	Environmental Studies For Community Living And Human Rights	Core 8	3	3
HS1815608	Environmental Studies For Community Living And Human Rights	Core Practical 8	2	1
	Nutrition for wellness	Open Course	4	3
		Total	**25**	**19**

Course	Details				
Code	HS1815105				
Title	**INTERIOR DECORATION**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	CORE COURSE 5 THEORY				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Identify the basic elements of design	R	4
2	Select appropriate colours for home decor	E	4
3	Develop basic skills for a career option in interior decoration	Ap	4
4	Choose appropriate furniture and lighting for homes	An, Ap	4
5	Construct basic design drafts for interior decor/organization	C	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Art and Design	12	1,3
1.1	Introduction to Interior Designing	2	3
1.2	Importance of good taste	2	1
1.3	Concept and objectives of interior decoration	2	1,3
1.4	Definition, Types of design	2	1
1.5	Elements of design-line, shape, texture, colour, pattern, light and space	2	1
1.6	Principles of design- proportion, balance, rhythm, emphasis, harmony	2	1
2.0	Colour		9 2,3
2.1	Qualities of colour	1	2
2.2	Prang colour system	2	2
2.3	Colour harmonies and schemes	2	2
2.4	Use and effects of various colours	2	2,3

2.5	Colour schemes for various rooms	2	2,3
3.0	Home Lighting	6	4,3
3.1	Importance of home lighting	1	4
3.2	Sources of lighting- natural and artificial	1	4
3.3	Types of lamps and types of lightings-Direct, Indirect, semi direct and semi indirect	2	4
3.4	Lighting for different rooms.	1	4,3
3.5	Physical and Psychological aspects of lighting	1	4
4.0	Furniture, Furnishing and Accessories	15	4
4.1	Furniture requirement for various rooms	1	4
4.2	Guidelines for selection and arrangement of furniture.	1	4
4.3	Classification and selection of soft furnishings.	2	4
4.4	Types of windows, window treatments - curtain styles	2	4
4.5	Selection and care of rugs and carpets	1	4,3
4.6	Accessories - Classification and their role in interiors	2	4
4.7	Flower arrangement - principles, different styles, and basic shapes	2	4
4.8	Drying techniques	1	4
4.9	Dry flower arrangement	2	4
4.10	Indoor gardening and bonsai	1	4
5.0	Interior and Exterior Space Organisation	12	5
5.1	Space requirement for various activities in various rooms	1	5
5.2	Storage , living, dining and bed rooms	1	5
5.3	Principles of space planning	1	5
5.4	Space saving techniques	1	5
5.5	Kitchen- types of kitchen	1	5
5.6	Modular kitchen	1	5
5.7	Working areas and work triangle	2	5
5.8	Objectives and principles of landscape gardening	1	5
5.9	Gardening Types-formal, informal; Styles	2	5
5.10	Garden components and routine duties in gardening	1	5

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- Faulkner, R. & Faulkner,S. (1961) Inside Today's Home. Rev. ed. © Holt, Rlnehart & Winston, Inc.
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Course	Details				
Code	HS1815605				
Title	**INTERIOR DECORATION**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	CORE COURSE 5 PRACTICAL				
Credits	1	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Select appropriate elements of design for application in home and work interiors	E	4
2	Apply suitable colour schemes in a design	Ap	4
3	Prepare flower arrangements in different shapes and styles	C,Ap	4
4	Evaluate interiors for their design elements	E,An	4
5	Create decorative arts and crafts	C,Ap	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Design and colour	18	1,2
1.1	Application of various types of design	3	1
1.2	5.Elements of design	3	1
1.3	6.Principles of designs	3	1
1.4	7.Application of motif in a design suitable for furnishing / accessories	3	1
1.5	8.Preparation of colour charts	3	2
1.6	9.Application of colour schemes in a design/ room	3	2
2	FlowerArrangement	8	3
2.1	Demonstration of basic shapes in flower arrangement	8	3
3	Furnishings	15	1
3.1	Curtain Styles : Illustration of various curtain styles	15	1
4	Evaluation of Interiors	5	4
4.1	Photographic evaluation of any two rooms (Living room, dining room, bed room, bath room, kitchen etc.)	5	4
5	Creative arts	8	5
5.1	Creation of art objects any decorative/ functional accessory	8	5

Course	Details				
Code	HS1815106				
Title	**HUMAN NUTRITION & BIOCHEMISTRY**				
Degree	BSc				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	CORE-THEORY 6				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Understand the significance of maintaining a healthy lifestyle with adequate physical activity and a balanced diet	U	3
2	Identify basic nutrients present in foods	R	2
3	Outline the metabolic pathways of the different macro and micronutrients in the body	E	2
4	Assess nutritional status of individuals by scientific methods Prepare diet plans for individuals of varying ages and physical states	An C	2 2
5	Understand the significance of maintaining a healthy lifestyle with adequate physical activity and a balanced diet	U	3

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Introduction to Nutrition Science		5 1
1.1	Define nutrition	1	1
1.2	RDA, Factors affecting RDA	1	1
1.3	RDA for different nutrients,	2	1
1.4	Indian reference man and woman.	1	1
2.0	Human Energy Requirements	6	1
2.1	Definition of energy	1	1
2.2	Factors influencing food intake, total energy requirements	1	1
2.3	Measurement of BMR, factors affecting BMR, thermic effect of food	2	1
2.4	Measurement of basal metabolism -Direct calorimetric-	1	1

	Bomb calorimeter		
2.5	Indirect calorimetric method- Benedict's oxy calorimeter. Energy requirements	1	1
3.0	Macronutrients and their metabolism	15	2,3
3.1	Carbohydrates-Functions, Metabolism –glycolysis	2	2
3.2	TCA cycle & its energetics	2	2
3.3	Types of dietary fibre, physiological and metabolic effects of dietary fibre and potential health benefits	2	3
3.4	a)Proteins – Classification of proteins and amino acids,	1	2
3.5	Functions, Metabolism – Deamination, Transamination, Decarboxylation	1	3
3.6	Protein turnover, methods of evaluating protein quality-Biological value, net protein utilisation, digestibility coefficient	2	3
3.7	b)Lipids – Composition, function	1	2
3.8	Lipid Metabolism–(Beta-oxidation, ketone body formation)	1	3
3.9	Water: Functions, Distributions of body water	1	2
3.10	Factors influencing water distribution, Regulation of water balance, requirements of water, dehydration, oedema	2	2
4.0	Vitamins and Minerals	15	2
4.1	a)Fat soluble vitamins- Classification, food sources, functions, deficiency/ cy/toxicity and requirements	3	2
4.2	Water soluble vitamins-Classification, food sources, functions, deficiency/toxicity, requirements	3	2
4.3	b)Macro minerals –Functions, food sources, deficiency/toxicity and requirements of calcium, phosphorus, sodium, potassium	3	2
4.4	Micro minerals –Factors affecting absorption of minerals, functions, food sources	3	2
4.5	Deficiency and requirements of iron, iodine, fluorine and zinc	3	2
5.0	Principles of Human Nutrition	13	4,5
5.1	)Assessment of nutritional status Anthropometry – measurements of height, weight, head and chest. Circumference, mid arm circumference, skin fold thickness, interpretation of		

	measurements and comparison with standards (NCHS, ICMR), classification according to grades of malnutrition	2	4
5.2	Clinical assessment of PEM, and deficiencies of vitamins and minerals	1	4
5.3	Biochemical parameters for assessing the nutritional status	1	4
5.4	Dietary Assessment – oral questionnaire (24 hour recall method), weighment method	1	4
5.5	Nutrition in Infancy-Nutritional requirement, breast feeding- advantages, Define- weaning and types of supplementary Foods	1	5
5.6	Nutrition in Preschool Age-Nutritional requirement, nutrition related problems, feeding patterns, Diet plan	1	5
5.7	Nutrition in school going age-Nutritional requirement, dietary guidelines, packed lunches, school lunch programme –mid day meal programme, diet planning	1	5
5.8	Nutrition inAdolescence-Nutritional requirement, factors influencing .dietary guidelines, eating disorders	1	5
5.9	Nutrition inAdolescence-Nutritional requirement, factors influencing dietary guidelines, eating disorders	1	5
5.10	Nutrition in Pregnancy-Physiological changes during pregnancy, nutritional requirements, complications in pregnancy- gestational diabetes, toxemia, effect of maternal malnutrition on foetus	1	5
5.11	Nutrition in Lactation-Nutritional requirements, human milk composition and importance, lactogogues, diet planning	1	5
5.12	Nutrition in old age-Factors affecting food intake and nutrient use, nutrient needs, diet planning	1	5

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Course	Details				
Code	**HS1815606**				
Title	**HUMAN NUTRITION AND BIOCHEMISTRY**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	CORE 6 PRACTICAL				
Credits	1	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Analyze various foods for their qualitative aspects	E,Ap	1
2	Assess the quality of frequently consumed food items	An	2
3	Examine food stuffs quantitatively for minerals and vitamins	E,An	2
4	Plan and formulate normal diets for various age groups	C	2

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Food Analysis	18	1
1.1	10. Qualitative tests for carbohydrates	6	1
1.2	11. Qualitative tests for protein	4	1
1.3	12. Qualitative tests for calcium	4	1
1.4	13. Qualitative tests for phosphorus	2	1
1.5	14. Qualitative tests for iron	2	3
2	15. Quantitative tests for various food stuffs	9	2,3
2.1	Lactose in milk	3	2
2.2	Vitamin C in food stuffs	3	3
2.3	Calcium in foods	3	3
3	Planning, preparing and serving normal diets for different ages	18	4
3.1	Infancy	2	4
3.2	Preschool age	2	4
3.3	School going age	2	4
3.4	Adolescence	2	4
3.5	Adult/Labourer	4	4
3.6	Pregnancy	2	4
3.7	Lactation	2	4
3.8	Old Age.	2	4

Course	Details				
Code	HS1815107				
Title	TEXTILE SCIENCE				
Degree	BSC.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	CORE THEORY 7				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Describe the production and properties of textile fibers and their uses.	U	4
2	Identify and classify textile fibers using the microscopic and burning tests	R, Ap	4
3	Understand the process of yarn making and characteristics of different types of yarns	U	4
4	Explain the different methods of fabric construction and identify different textile weaves	U,An	4
5	Describe different methods of Textile dyeing and printing.	U	4
6	Apply some basic hand printing methods on textile fabrics	Ap	4
7	Describe the different methods of finishes and its purpose	U	4
8	Discuss some of new trends in textiles	U	4
9	Evaluate Indian textile market and its global position	E	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Study of Fibres	10	
1.1	Definition, primary, secondary and miscellaneous properties and classification.	2	1
1.2	Production, properties and uses of Textile fibres- cotton linen, wool, silk, rayon, nylon, and polyester	3	1
1.3	A brief introduction to jute, bamboo, spandex and organic cotton.	2	1
1.4	Methods of identification of textile fibres- visual test, microscopic test and burning test	3	2
2.0	Study of yarns	14	
2.1	Definition, process of making fibre in to yarn- hand, mechanical- conventional-ring spinning, direct-open end spinning and chemical.	5	3
2.2	Classification of yarns-Types -simple, complex, textured, bi-component, and blends.	5	3
2.3	Characteristics of yarns -twist and count.	4	3
3.0	Fabric structure	12	
3.1	Weaving- Loom parts and its operations, a brief introduction to shuttle less looms- projectile,rapier and jet loom.	4	4
3.2	Basic weaves- plain, twill and satin. Fancy Weaves-, jacquard, dobby, lappet , clip spot, crepe and double cloth.	4	4
3.3	Characteristics of woven fabrics –warp and weft, grain, selvedge, thread count and balance.	2	4
3.4	Other methods of fabric construction-knitting, felting, lace making, laminating, bonding, and braiding	2	4
4.0	Dyeing, Printing	10	
4.1	Classification of dyes: Natural, artificial- acid, basic, disperse, vat, naphthol, pigment, sulphur, and mordant.	4	5
4.2	Stages of dyeing-stock, yarn, piece, product, cross and union dyeing-	2	5
4.3	Printing:-Direct- roller, block, screen and stencil. Resist- tie & dye, batik and Discharge.	4	5,6
5.0	Fabric Finishes		8

5.1	Definition, purpose. Classification	1	7
5.2	Types-singeing, bleaching, mercerization, calendaring, shrinkage control, sanforizing, crabbing, beetling, sizing, weighting, shearing, fulling, schrienerizing, crepe,	3	7
5.3	Special finishes-water proofing, flame proofing, and anti-bacterial finish.	1	7
5.4	New Trends in Textiles-Brief introduction to Technical textiles, medicinal fabrics, Nano textiles and geo textiles.	2	8
5.5	Indian Textile market –Overview and global position	1	9

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Course	Details				
Code	HS1815607				
Title	**TEXTILE SCIENCE PRACTICAL**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	CORE 7 PRACTICAL				
Credits	1	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Identify textile fibre by their appearance and texture	U,R	
2	Analyze the textile fibres and test claims given by fabric manufacturers.	An	
3	Understand the process of basic fabric construction.	Ap,U	
4	Assess fabric quality and make wise purchase decisions.	E,An	
5	Prepare printed fabrics by applying hand printing techniques.	C,Ap	
6	Understand the current trends in textile and fashion industry	U	

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Collection of different textile fibres (Cotton, Silk, Polyester, Nylon, wool andrayon)	5	1
2	Testing of fibers: - Visual Inspection, Burning and Microscopic	5	2
3	Fabric structure: Basic weaves- Collect samples for all the Basic weaves and their variations.	6	3
4	Fancy weaves- Collect samples for Pile, Dobby, Jacquard, Leno, Clip Spot, Lappet and Doule Cloth	6	4
5	Thread count: - Collect samples for low medium and high count fabric.	4	4
6	Prepare samples for Block, Batik and Tie & Dye (any two variations)	5	5
7	Visit to Mills /Shops	5	6

Course	Details				
Code	HS1815108				
Title	**ENVIRONMENTAL STUDIES FOR COMMUNITY LIVING & HUMAN RIGHTS**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3 / V				
Type	CORE 8 –THEORY 8				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Understand the need for conserving the environment and become responsible citizens	U	1,6
2	List major ecosystems, ecoregions, vegetation types and endemic regions in India and Kerala	R	6
3	Compare and choose suitable energy conservation techniques	E,An	6
4	Find innovative solutions for promoting sustainability in food systems	Ap	6
5	Describe the major problems associated with the environment and possible solutions	R	6
6	Incorporate eco friendly techniques in planning and implementing product designs	C,Ap	4,6
7	Outline the various laws, standards and contemporary issues pertaining to sustainable environment	R,U	6
8			

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Multidisciplinary nature of environmental studies	16	1
1.1	Definition, scope and importance Need for public awareness	2	1
1.2	Natural Resources -Renewable and non-renewable resources: Natural resources and associated problems.	1	1
1.3	Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.	1	1
1.4	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.	1	1
1.5	Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.	1	1
1.6	Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.	1	1
1.7	Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.	1	1,5
1.8	Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. ?	1	1,5
1.9	Role of an individual in conservation of natural resources.Equitable use of resources for sustainable lifestyles.	1	1,5
1.10	Ecosystems Concept of an ecosystem. Structure and function of an ecosystem. Producers, consumers and decomposers. ?	1	2
1.11	Energy flow in the ecosystem. Ecological succession.	1	2
1.12	Food chains, food webs and ecological pyramids.	1	2
1.13	Introduction, types, characteristic features, structure and function of the? following ecosystem :- Forest ecosystem ,Grassland ecosystem, Desert ecosystem,Aquatic ecosystems (ponds, streams, lakes, rivers, oceans estuaries)	3	2
2.0	Biodiversity and its conservation	7	2
2.1	Introduction – Definition. Biogeographical classification of India.	2	2
2.2	Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values.India as a mega-diversity nation ?	2	2

2.3	Hot-sports of biodiversity. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.	2	2
2.4	Endangered and endemic species of India	1	2
2.5	Environmental Pollution	7	5
2.6	Definition. Cause, effects and control measures of :- Air pollution, ? Water pollution,?Soil pollution, Marine pollution, Noise pollution, Thermal pollution	2	5
2.7	Nuclear hazards Solid?industrial wastes. ?.	1	5
2.8	Role of an individual in prevention of pollution. Pollution case studies.	1	5
2.9	Disaster management: floods, earthquake, cyclone and landslides	1	5
2.10	Waste Management: Causes, effects and control measures of urban andindustrial waste	2	5
2.11	Social Issues and the Environment	7	5
2.12	From Unsustainable to Sustainable development. ?	1	5
2.13	Urban problems related to energy,	1	5
2.14	Water conservation, rain water harvesting, watershed management.	1	5
2.15	Resettlement and rehabilitation of people; its problems and concerns. Case Studies	1	5
2.16	Environmental ethics: Issues and possible solutions. ? Consumerism and waste products.	1	5
2.17	Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies.	1	5
2.18	Environment Protection Act. ?Air (Prevention and Control of Pollution) Act. Water (Prevention and control of Pollution) Act.? Wildlife ProtectionAct Forest Conservation Act. Issues involved in enforcement of environmental legislation. Public awareness	1	7
3.0	Textiles, Fashion Industry and Environment	5	6
3.1	Environmental impacts related to cultivation, processing and uses of textile fibers.	1	6
3.2	Eco friendly practices in textiles and use of eco labels	1	6
3.3	Recycling of textile products.	1	6
3.4	BBaby care Products market and environmental issues. Harmful chemicals in baby products- baby food creams and lotions, disposable towels, napkins, wipes, diapers, bedding, containers/bottles and plates.	1	6
3.5	Environment impact and green alternatives. Eco-friendly baby care – bringing up a green baby.	1	6

4.0	Nutrition for sustainable environment	4	4
4.1	Sustainable Food System	1	4
4.2	Importance of sustainable food supply, ways to promote sustainability.	1	4
4.3	Effects of diet, physical activity and pollutants on human health.	2	4
5.0	Human Rights		8 7
5.1	Human Rights– An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).	1	7
5.2	Human Rights and United Nations – contributions, main human rights related organisations -UNESCO,UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights.	2	7
5.3	Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities	1	7
5.4	Environment and Human Rights - Right to Clean Environment and Public Safety: Issues of Industrial Pollution,.	1	7
5.5	Issues of Waste Disposal, Protection of Environment Conservation of natural resources and human rights:	1	7
5.6	Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Reports, Case studies and policy formulation	1	7
5.7	Conservation issues of western Ghats- mention Gadgil committee report, Kasthurirengan report. Over exploitation of ground water resources, marine fisheries, sand mining etc.	1	7

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Course	Details				
Code	HS1815608				
Title	**ENVIRONMENTAL STUDIES FOR COMMUNITY LIVING & HUMAN RIGHTS**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3 / V				
Type	CORE 8 -PRACTICAL				
Credits	1	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Explain the need for green consumerism and ways to incorporate into day to day lives.	U	1, 6
2	Understand the current trends in eco friendly products available in themarket.	U,R	6
3	Find innovative solutions for promoting sustainability in food systems	Ap	6
4	Incorporate eco friendly techniques in planning and implementing product designs	C,Ap	4, 6
5	Outline the rights of women and children in india	R,U	6

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Make a power point presentation on green consumerism.	4	1
2	Create a beneficial product from used/old clothes.	3	4
3	Make a list of eco friendly textiles available in the market with price.	3	4
4	Make a power point presentation on eco friendly baby care.	4	4
5	Make audio visual aids to create awareness on the harmful chemicals in baby careproducts.	4	1
6 7	Survey of organic foods available in the market. Visit to an organic farm.	4 4	2 3
8	Create a collage on sustainable living.	5	3
9	Make an illustrated chart on rights of women and children in India.	5	5

Course	Details				
Code	**HS1815303**				
Title	**NUTRITION FOR WELLNESS**				
Degree	Bsc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/V				
Type	Open Course				
Credits	3	Hrs/week	4	Total hrs	72

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Identify the basic macro and micro nutrients in common foods.	R	2
2	Discuss on the various dietary practices and its role in maintaining good health.	U	2
3	Plan and prepare balanced diets for different age groups.	C, Ap	2,4
4	Choose appropriate diets for various physiological conditions.	E	2
5	Modify basic diets for common lifestyle diseases.	Ap	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Introduction to Nutrition	7	2
1.1	Define Health	1	2
1.2	Introduction to nutrition	1	2
1.3	Food groups	1	2
1.4	Balanced Diet	1	2
1.5	Food guide pyramid :a tool for planning Local, regional and International diets	3	2
2.0	Study of Macronutrients	10	1
2.1	Carbohydratres	4	1
2.2	Proteins	3	1
2.3	Fats	3	1
3.0	Study of Micronutrients	10	1
3.1	Vitamins – functions, deficiency, sources in brief	2	1

3.2	Minerals- functions, deficiency, sources in brief	2	1
3.3	Calcium	1	1
3.4	Phosphorous	1	1
3.5	Iron	1	1
3.6	Iodine	1	1
3.7	Fluorine	1	1
3.8	Zinc	1	1
4.0	Planning a healthy Diet	25	2,4
4.1	Life cycle nutrition: Nutritional requirements planning diets for:	2	2,4
4.2	Pregnancy	2	2,4
4.3	Lactation	2	2,4
4.4	Preschool	2	2,3
4.5	School age	2	2,3
4.6	Adolescents	2	2,3
4.7	Adults	2	2,3
4.8	Old age	2	2,3
4.9	Factors affecting meal planning	3	2
4.10	Balanced diet	3	2
4.11	Steps in planning balanced diet	3	2
5.0	Modified Diets	20	2,5
5.1	Basic principles in diet modifications	4	5
5.2	Principles of dietary management	4	2,5
5.3	Cardiovascular diseases	3	5
5.4	Diabetes	3	5
5.5	Cancer	3	5
5.6	Obesity and underweight	3	5

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SEMESTER VI				
Course Code	**Title of the Course**	**Course Category**	**Hours /week**	**Credits**
HS1816109	Family Resource Management	Core 9	3	3
HS1816609	Family Resource Management	Core Practical 9	2	1
HS1816110	Clinical Nutrition and Dietetics	Core 10	3	3
HS1816610	Clinical Nutrition and Dietetics	Core Practical 10	3	1
HS1816111	Fashion Designing and Apparel Production	Core 11	3	3
HS1816611	Fashion Designing and Apparel Production	Core Practical 11	3	1
HS1816112	Extension Education and Communication	Core 12	3	3
HS1816612	Extension Education and Communication	Core Practical 12	2	1
HS1816306	Food Saftey	Choice Based Course (Elective)	3	3
HS1816801	Project work		-	2
		Total	**25**	**21**

Course	Details				
Code	HS1816109				
Title	**FAMILY RESOURCE MANAGEMENT**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE 9 THEORY				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	State the basic principles of management	R	4
2	Execute a plan for effective management of an event	Ap	5
3	Formulate time plans for effective balance of work and leisure	C	4
4	Incorporate appropriate work simplification methods for day to day activities	An,Ap	4
5	Identify the signs of fatigue and implement strategies to reduce it	E,An	4
6	Plan and prepare a budget for the family	C	4
7	Understand techniques for energy conservation and effectively manage household and other wastes	E	6
8	Critically evaluate consumer products prior to purchase	U,Ap	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Introduction to Management	9	1
1.1	Management Basics	1	1
1.2	Steps Involved in the Process of Management – Planning, organising, Controlling the Plan inAction and Evaluating.	2	1
1.3	Decision Making –Role of Decision Making in Management,	1	2
1.4	Steps in Decision Making, types.	1	2
1.5	Methods of Resolving Conflicts.	1	2
1.6	Motivating factors in management- Values, Goals and Standards,	1	2
1.7	Stages of Life Cycle	1	1
1.8	Qualities of a Good Manager.	1	1
2.0	Management of Human Resources	15	1
2.1	Family Resources: Meaning and Classification,	1	1
2.2	Characteristics of Resources,	1	1
2.3	Factors Influencing Resource Management, Means to Optimize Satisfaction in Resource Management.	2	1
2.4	Management of Time: steps in making time plan,	1	3
2.5	Tools and Aids in Time Management - time norm, time cost, peak load, work curve, Leisure time and its utilisation	2	3
2.6	Management of Energy: Energy as Resource, Significance of Energy Management,	1	4
2.7	Energy Requirements for Various Household Activities, Work Curve or production curve,	1	4
2.8	Fatigue – Classification, Causative Factors and Alleviating Techniques,	1	5
2.9	Work Simplification – Meaning and Techniques,	1	4
2.10	Mundell's Classes Of Change.	1	4
2.11	Labour saving Equipments - Principle, Use and Care of the Equipments Such as Cookers, Mixers and Grinders, Refrigerator, Washing Machine and Dish Washers.	3	4
3.0	Management of Non-human Resources	9	6

3.1	Management of Money	1	6
3.2	Family Income as a Resource – Types of Income,	1	6
3.3	Guidelines in money management- Income Profiles;	1	6
3.4	Methods of handling income, Family Budget – Types of Budget, Steps in Making Family Budget, Engel's Laws of Consumption	2	6
3.5	Account keeping, Financial Records – Types, Purpose and Advantages	1	6
3.6	Savings and Investments – Meaning, Saving Institutions and Schemes,	1	6
3.7	Supplementing family income	1	6
3.8	Family Credit – Types, Sources, Use and Misuse	1	6
4.0	Energy conservation and waste management	15	7
4.1	Techniques for Conservation of household fuel,	2	7
4.2	Biogas, solar energy, windmill.	2	7
4.3	Waste Management	2	7
4.4	Types of Domestic Waste,	2	7
4.5	Principles of Waste Management,	2	7
4.6	Disposal of Waste-Landfill, incineration, composting, vermin-composting.	3	7
4.7	6 R'S of Waste Management-Refuse, reduce, reuse, recycle, recover and rot	. 2	7
5.0	Consumer Education	6	8
5.1	Consumer Education – Meaning.	1	8
5.2	Consumer Problems,	1	8
5.3	Rights and Responsibilities of a Consumer,	1	8
5.4	Consumer Aids	1	8
5.5	Consumer Protection,	1	8
5.6	Consumer Redressal Procedure and Better Buying Practices.	1	8

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Course	Details				
Code	HS1816609				
Title	**FAMILY RESOURCE MANAGEMENT**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE 9 PRACTICAL				
Credits	1	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Make proper use of time and energy for efficient completion of day to day tasks	Ap	4
2	Prepare budgets for family and other institutions/ events	C	4
3	Critically examine the various methods available for waste management	An	4
4	Make wise purchase decisions by making use of consumer aids	Ap,E	4
5	Plan and organize family and other social events	Ap,C,E	5
6	Compare available energy saving devices and make appropriate choices for usage in homes	Ap	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Management of Time and Energy	12	1
1.1	Time schedule: Preparation of time plan for college girl / homemaker and its evaluation	6	1
1.2	Work study: Determination of working height in vertical and horizontal planes.	6	1
2	Management of money and material resources	10	2
2.1	Budget Planning - preparation of a model family budget for your family / budget suitable for various categories	2	2
2.2	Energy Conservation - Visits to		

	organizations/institutions involved with Alternate energy programmes	2	6
2.3	Study of Devices/ Techniques for Conservation of Energy / Renewable Energy Devices (Solar Devices and Biogas)	2	6
2.4	Waste Management - Study of waste management practices in your house/locality	2	3
2.5	Development of an object from household waste.	2	3
3	Consumer Education	4	4
3.1	Development and evaluation of Labels /Advertisements for consumer products,	2	4
3.2	Preparation of a consumer complaint for any consumer product.	2	4
4	Event Management	10	5
4.1	Planning, organizing, implementing and evaluating a group activity (Party/Exhibition/ tour) Or Residence stay for a week incorporating principles of management	10	5

Course	Details				
Code	HS1816110				
Title	**CLINICAL NUTRITION AND DIETETICS**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE THEORY 10				
Credits	3 (T)	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Describe the different types of diets and feeding methods	R	1,2
2	Explain the nutritional management in various disease conditions	U	2
3	Maintain a healthy weight and manage a healthy lifestyle	Ap	2
4	Analyze the various causative factors of common illnesses	An,E	1
5	Formulate diet plans for various disease conditions	C,Ap	1
6	Understand the prevalent conditions of malnutrition in the community	U,An	5

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Concepts of Dietetics	9	1
1.1	Purpose and Principles of Therapeutic diets.	2	1
1.2	Definition of Nutritional care Process and Team Approach to nutritional care.	2	1
1.3	Role of Dietitian	2	1
1.4	Classification of Therapeutics diets.	1	1
1.5	Progressive diets – clear fluid, full fluid, soft and regular	1	1
1.6	Special feeding methods - enteral feeding, parenteral feeding	1	1
2.0	Nutritional Management of common disorders	8	2
2.1	Aetiology, Clinical features and Nutritional Management of fever	2	2

2.2	Fever, classification of fevers, acute & chronic	2	2
2.3	Typhoid and Tuberculosis	1	2
2.4	HIV / AIDS	1	2
2.5	Gastrointestinal disorders: Peptic Ulcer, Constipation, Diarrhoea.	2	2
3.0	Nutritional Care in Weight Management, Diabetes Mellitus and Coronary heart diseases	14	2
3.1	Aetiology, Clinical features, Diagnosis, Complications and Nutritional life style modifications and management in: Weight Management	3	3
3.2	Overweight and obesity	2	3
3.3	Underweight	2	3
3.4	Diabetes Mellitus: Type 1 and Type 11	3	2
3.5	Coronary Heart Diseases: Atherosclerosis and Hypertension	4	2
4.0	Dietary Management of Liver diseases, Renal disorders and Cancer	15	2
4.1	Aetiology, Symptoms and dietary Management of: Liver Diseases: Infective Hepatitis	3	2,4
4.2	Cirrhosis	3	2,4
4.3	Renal Disorders: Acute and Chronic Nephritis,	3	2,4
4.4	Nephrotic Syndrome	3	2,4
4.5	Cancer	3	2,4
5.0	Nutritional Problems of the community	8	6
5.1	Prevalence, Causes, Consequences, Prevention and Control of: PEM	2	6
5.2	Iodine Deficiency Disorders	2	6
5.3	Iron deficiencyAnaemia	2	6
5.4	VitaminAdeficiency	2	6

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Course	Details				
Code	HS1816610				
Title	**CLINICAL NUTRITION AND DIETETICS**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE 10 PRACTICAL				
Credits	1	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Evaluate body weight status using BMI measures	E	1
2	Formulate diets for various disease conditions.	C	2
3	Select appropriate feeding techniques for various illnesses	An, E	1
4	Understand the working of a hospital dietary unit	U	1

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Calculation of BMI using height-weight measurements	4	1
2	Preparation of Therapeutic Recipes. Types of Therapeutic Diet : Normal Soft, Fluid – Full Fluid and Clear Fluid Diets	18	2
3	Diet plan for various disease conditions	28	3
3.1	Fever patient (Typhoid/Tuberculosis)	4	3
3.2	Diabetic Mellitus	2	3
3.3	CHD (Atherosclerosis)	2	3
3.4	Peptic Ulcer	2	3
3.5	Hepatitis	2	3
3.6	Cirrhosis	2	3
3.7	Nephritis	2	3
3.8	Obesity	2	3
3.9	Under weight	2	3
3.10	PEM (Kwashiorkor)	2	3
3.11	Iron DeficiencyAnaemia	2	3
3.12	Cancer- breast cancer	2	3
4	Visit to a feeding programme / Diet clinic	4	4

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Course	Details				
Code	HS1816111				
Title	**FASHION DESIGNING AND APPAREL PRODUCTION**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE COURSE 11 THEORY				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	***Expected Course Outcomes*** *Upon completion of this course, the students will be able to*:	**Cognitive Level**	**PSO No.**
1	Describe the different terminologies and principles related to contemporary fashion	R	4
2	Explain the fundamentals of fashion designing	U	4
3	Understand and use the elements and principles of design Apply the use of pattern making for fashion and clothing	U,Ap U,Ap	4 4
4	Design garments for different figure types. Visualize and Apply the basic procedure in garment construction	U, C U, Ap	4 4
5	Explain the organisation of garment industry and marketing	An	4
6	Discuss the Indian apparel market in global perspective	E	4
7	Describe the different terminologies and principles related to contemporary fashion	R	4
8	Explain the fundamentals of fashion designing	U	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Introduction to Fashion	10	
1.1	Terms related to the fashion industry,	1	1
1.2	Fashion evolution – Fashion cycles, consumer groups in fashion cycles– fashion leaders , fashion innovators, fashion adopters , laggards.	3	1
1.3	Adoption of Fashion – trickle down , trickle up and trickle across theory .	2	1
1.4	Fashion forecasting .	1	1
1.5	Principles and factors influencing fashion.	2	1
1.6	Seasons of fashion	1	1
2.0	Fundamentals of Fashion Designing	12	
2.1	8 -head theory.	1	2
2.2	Basic body shapes	1	2
2.3	Design- definition and types – structural and decorative design, requirements of a good structural and decorative design.	1	2
2.4	Elements of design – line, shape or form, colour , size and texture.	3	3
2.5	Principles of design- .Balance – formal and informal, Rhythm- through repetition, radiation and gradation, Emphasis, Harmony and Proportion.	3	3
2.6	Designs suitable for various figure types.	3	5
3.0	Introduction to Pattern Making	12	
3.1	Body measurement –importance, guidelines for measuring, ladies and children's measurements.	2	4
3.2	Pattern making –methods of pattern making – Drafting, draping , commercial patterns -merits and demerits. Pattern details.	5	4
3.3	Pattern alteration-lengthening and shortening of bodies block, skirt and sleeve block.	5	4
4.0	Garment Construction.	10	
4.1	Preparation of fabric for cutting.	1	6
4.2	Pattern layouts	2	6
4.3	Marking, cutting, stitching and finishing of	2	6

	garments.		
4.4	Parts and functions of a single needle machine,	2	6
4.5	Tools and equipments used for sewing.	2	6
5.0	Introduction to Garment industry and Marketing	10	
5.1	Functions of various departments in garment industry- design department, marketing department, finance department, purchasing department, production department and operation department.	5	7
5.2	Marketing - definition, marketing mix.	2	7
5.3	Merchandising- definition, role of merchandiser.	1	7
5.4	Indian apparel market-overview and global position	2	8

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Course	Details				
Code	HS1816611				
Title	**FASHION DESIGNING AND APPAREL PRODUCTION**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE COURSE 11 PRACTICAL				
Credits	1	Hrs/week	3	Total hrs	54

CO No.	***Expected Course Outcomes*** *Upon completion of this course, the students will be able to*:	**Cognitive Level**	**PSO No.**
1	Prepare paper patterns for cutting assembling and fitting garments.	C	4
2	Create new designs corresponding to one's own ideas and creativity.	C,Ap	4
3	Understand body proportions and their role in garment making.	U	4
4	Assess the suitability of various garments for different occasions.	E,An	4
5	Modify basic patterns to develop a wide range of styles in apparel construction.	Ap	4
6	Repair or recycle old garments by adding decorative and design elements and create new styles.	Ap	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Garment Designing	10	
1.1	Illustrating fashion figure - 8 heads female	5	3
1.2	Sketching of formal wear, party wear and suitable for children and women on croquis (two styles each)	5	4
2	Sewing Techniques	20	
2.1	Basic Hand Stitches - Basting, overcasting, hemming.	2	2
2.2	Hand embroidery stitches – minimum 5 nos	2	2
2.3	Seams – Plain seam, French seam, flat fell seam, top stitched seam, piped seam	2	2,5,6
2.4	Seam finish – double stitched	2	2
2.5	Introducing Fullness in a garment- Gathers – gathering by hand, gathering by machine, gathering by elastic Pleats- Knife pleats, box pleats, inverted pleats. Darts and tucks– single pointed dart, double pointed dart, pin tucks	 2 2 2	2 2,5,6 2,5,6 2,5,6
2.6	Plackets and placket openings One piece placket, two piece placket	2	2
2.7	Bias and its application Joining bias, bias facing, bias binding, shaped facing	4	2
2.8	Hems Narrow machine stitched hem, stitched and turned hem	2	2
2.9	Fasteners Button and button hole, press buttons , hook and eye	2	2
3	Garment Construction		24
3.	Preparation of paper patterns and construction of a A-line frock for a preschool child with any type of collar and sleeve	12	1
3.2	Preparation of paper patterns and construction of churidar/salwar and Kameez for an Adolescent girl.	12	1

Course	Details				
Code	HS1816112				
Title	**EXTENSION EDUCATION AND COMMUNICATION**				
Degree	BSC				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE COURSE 12 THEORY				
Credits	**3**	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Explain and analyse the widening concept of extension education in India.	U,An	5
2	Effectively bring about extension education among the members of all communities	A	5
3	Discuss the need and role of home science extension in upbringing the family and society.	E	5
4	Describe the community development and its set up in India	U	5
5	Distinguish the socio cultural and economic environment of rural, urban and tribal communities.	An	5
6	Recognize the importance of rural Leadership in bringing about planned change in human behaviour for developing community	R	5
7	Plan, implement and evaluate an extension programme.	C	5
8	Describe the basics in communication and explain the different methods of approaching people.	U	5
9	Prepare and use technologically advanced visual aids in teaching and communication	C,Ap	5

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.0	Extension	10	
1.1	Extension-Meaning, principles, concepts, scope and objectives of extension education in In India.	1	1
1.2	Role of an extension worker.	1	1
1.3	Qualities of an extension worker.	1	1
1.4	Steps in extension teaching process,	2	2
1.5	Criteria for effective extension teaching and learning.	1	2
1.6 1.7	Home Science Extension Education. Role of Home Science Extension Education in Community development	2 2	3 3
2.0	Community development in India	15	
2.1	Objectives and principles of community development programme in India.	1	4
2.2	Community development set up-at the national, state, district, block and village levels.	3	4
2.3	Types of communities in India and its special features-Rural , Urban, andTribal	2	5
2.4	Basic rural Institutions- school, panchayat, co-operatives; other institutions mahila mandals, youth clubs, farmers organizations.	2	5
2.5	Some of the Women and child development programmes implemented by the Government of India- Support to Training and Employment Programme for Women (STEP), Swarnajayanti Gram Swarojgar Yojana (SGSY) ,Integrated Child Development Service (ICDS) .	3	5
2.6	Leadership -Concept and definitions, types of community leaders-Professional leader and lay leaders; autocratic, democratic and lassiez-faire leaders.	2	6
2.7	Methods of identifying community leaders.	1	6
2.8	Importance of rural Leadership for community development	1	6
3.0	Programme planning ,implementation and evaluation in Extension	5	
3.1	Objectives, principles and steps involved.	2	7
3.2	Plan of work-components, developing a plan of work, factors to be considered.	2	7
3.3	Implementation and evaluation	1	7
4.0	Communication, and methods of approaching	15	8

	people		
4.1	Definition and importance,	1	8
4.2	Elements of communication- leagen's model, problems in communication,	1	8
4.3	Motivation- methods of motivating people.	1	8
4.4	Classification of extension teaching methods/methods of approaching people- individual, group and mass methods.	2	8
4.5	Individual methods- personal visits, letters.	2	8
4.6	Group methods-meetings, discussions, demonstrations, folk songs , drama ,role play, seminar ,field trips, exhibitions.	2	8
4.7	Mass methods-Print and electronic media.	1	8
4.8	Modern methods-computer based technologies-email, blogs, podcast, video sharing ,Teleconferencing, social networking for connecting people globally	2	8
4.9	Scope, advantages and limitations of each methods.	2	8
4.10	Factors guiding the selection and use of methods.	1	8
5.0	Audio-VisualAids	9	
5.1	Definition, Importance of audio-visual aids in communication.	2	9
5.2	Classification of audio-visual aids-audio, visual and audio visual aids cone of experience	3	9
5.3	Factors to be considered in selection, preparation and use of audio visual aids .	2	9
5.4	Merits and demerits of Audio-Visual aids	2	9

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Course	Details				
Code	HS1816612				
Title	**EXTENSION EDUCATION AND COMMUNICATION**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	CORE COURSE 12 PRACTICAL				
Credits	**1**	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Interact with extension workers and understand their nature of work and their commitment towards the society.	U	5
2	Understand the role of community organizations.	R	5
3	Plan, implement and evaluate an extension programme for the advancement of the society.	Ap,E	5
4	Prepare visual aids for conveying messages related to the betterment of livelihood of the general public.	C	5
5	Analyze news articles or media content and assess their credibility.	E,An	5
6	Prepare articles for presentation in print and electronic media.	C	5

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1	Extension Education Interview an extension worker to find out his/her role.	5	1
2	Community Development in India		
2.1	Visit any one community organization (Panchayat/Cooperatives /School / Krishy Vigyan Kendra) to find out its role in community development and record the services rendered.	5	2
2.2	Observe the working of any one community development programme in your community and record its features.		52
3	Programme planning ,implementation		

	and evaluation in Extension Plan, implement and evaluate an extension programme related to Home Science.	12	3
4	Communication and methods of approaching people Write a report of an exhibition /fairs/street drama you observed.	2	3
5	Audio-VisualAids		
5.1	Collection and evaluation of visual aids	2	4
5.2	Preparation of visual aids.(leaflet, pamphlet, poster and two types of charts)	4	4
5.3	Review of media on selected development issues and report its characteristics' (a news paper article, Radio and TV message.)	1	5,6

Course	Details				
Code	**HS1816306**				
Title	**FOOD SAFETY**				
Degree	BSc				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	3/VI				
Type	ELECTIVE COURSE				
Credits	3	Hrs/week	3	Total hrs	54

CO No.	Expected Course Outcomes Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Recognize the need for food quality assurance	R	1
2	Understand the parameters involved in quality control	U	6
3	Compare and choose appropriate methods for water treatment	E,An	6
4	Describe the various toxicants found in foods	U	6
5	Assess the quality of foods purchased by detecting possible food adulterants	E,Ap	6
6	Outline the different laws and standards pertaining to foods	U,R	6
7	Identify food borne illnesses and measures to prevent them	U,E	6

Module	Course Description	Hrs	CO.No.
1.0	Introduction to quality assurance and food safety assurance	8	1
1.1	Current concepts of quality control	2	1
1.2	Food quality,	2	1
1.3	Quality control- parameters followed in quality control,	2	1
1.4	Important considerations, principles of quality control	2	1
2.0	Food safety	8	1
2.1	Food Sanitation and Hygiene	1	1
2.2	Water- potable water, sources of contamination, treatment of water	2	3
2.3	Food – Food handling and the sources of contamination,	2	1
2.4	Safe food practices (buying food, storing food,preparing food, cooking food, serving food)	2	2
2.5	Practical rules for food sanitation	1	2
3.0	Food Toxins/Contamination of food	13	4
3.1	Main Groups of Food Toxins – prevention/control	1	4
3.2	Classification of toxic chemicals in foods-	1	4
3.3	Natural toxicants in foods – (i)Toxic amino acids ,	1	4
3.4	Cyanogenic glycosides, Toxic alkaloids,	1	4
3.5	Trypsin inhibitors,	1	4
3.6	Haemagglutinins, Flatulence factors	1	4
3.7	Natural toxicants entering through contaminants:- (i) Plant origin, (ii)Microbial Origin, (iii) Biological origin	1	4
3.8	Chemical toxicants of external origin;-	1	4
3.9	Toxic metals,Residues of pesticides and Agrochemicals	1	4
3.10	Contamination from processing practices,	1	4
3.11	Contamination from packaging materials	1	4
3.12	Accidental contaminants	1	4
3.13	Contaminants from Environment.	1	4
4.0	Food borne diseases /illness	10	7
4.1	Causes, symptoms and control	2	7
4.2	Food borne infections	1	7
4.3	Bacterial Diseases- Typhoid fever,	1	7
4.4	Salmonellosis	1	7
4.5	Viral diseases:-Viral hepatitis	1	7
4.6	Gastroenteritis	1	7
4.7	Infections due to parasites;- Taeniasis, Amoebiasis,	1	7

4.8	People risk of food borne illness	1	7
5.0	Food Adulteration and Labelling, Food Laws and Food standards	15	5,6
5.1	Food Adulteration and Labelling	1	5
5.2	CommonAdulterants	1	5
5.3	Effects of Food Adulteration, simple tests to detect adulterants in foods,	1	5
5.4	Prevention of food adulteration	1	6
5.5	Nutritional Labelling (Importance, effective labelling)	1	6
5.6	International food laws and standards:-Codex Alimentarius,	1	6
5.7	Food, Drug and Cosmetic Act	1	6
5.8	Indian Food laws and standards	1	6
5.9	Compulsory standards-Prevention of Food Adulteration Act, 1954 (PFA), Essential commodities Act, 1954	1	6
5.10	Brief listing of the Control Orders under this Act Viz. The Fruit Products Order, 1955(FPO)	1	6
5.11	Meat Products Control Order, 1973	1	6
5.12	Milk and Milk Products Order, 1992	1	6
5.13	, Solvent extracted oils, De-l oiled meal and Edible Flour Control Order1967	1	6
5.14	Vegetables Products Control Order,1976 and Standards on weights and measures (Packaged Commodities) Rules, 1977.	1	6
5.15	Voluntary Standards- Bureau of Indian Standards (BIS) , The Agricultural Products (Grading and marking) Act, 1937, FSSAI, HACCP	1	6

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Course	Details				
Code	**HS1816307**				
Title	**EARLY CHILDHOOD CARE**				
Degree	BSc.				
Branch(s)	Family and Community Science (Home Science)				
Year/Semester	2/4				
Type	Extra Credited Course				
Credits	2	Hrs/week	2	Total hrs	36

CO No.	Expected Course Outcomes. Upon completion of this course, the students will be able to:	Cognitive Level	PSO No.
1	Understand the importance of early childhood care for healthy human development.	U	3
2	Choose healthy and safe products for baby care.	Ap,E	3
3	Formulate foods appropriate for healthy child growth and development.	E,C	2
4	Develop the ability to apply different early stimulation programmes for children.	Ap	3
5	Provide and select suitable play type and toys for overall development of the child.	E	4

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember;
U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.	**Maternal Care during pregnancy and Child outcome**	**6**	**1**
1.1	Conception to birth	2	1
1.2	Maternal physical and mental health and child development	2	1
1.3	Role of family in child care and development.	2	1
2.	**Care of the new born baby**	**7**	**2,3**
2.1	Feeding the baby	2	2,3
2.2	Clothing the baby	2	2
2.3	Use of baby care products	2	2
2.4	Immunization	1	2
3	**Nutrition**	**8**	**3**
3.1	Nutrition in infancy	2	3
3.2	Feeding a low birth weight baby.	1	3
3.3	Dealing with lactation failure.	1	3
3.4	Supplementary feeding.	1	3
3.5	Diet for a preschool child.	1	3
3.6	Nutrition status assessment and its importance.	1	3
3.7	Methods to assess nutrition status of children.	1	3
4	**Early stimulation for children**	**8**	**4**
4.1	Definition	1	4
4.2	Role of environmental stimulation for the all round development of children.	1	4
4.3	Environmental stimulation for physical and motor, intellectual, emotional, social and language development.	2	4
4.4	Play and toys for children, importance	1	5
4.5	Types of play	1	5
4.6	Selection of toys	1	5
4.7	Indigenous toys	1	5

Course	Details					
Code						
Title	Certificate Course in Fashion Designing					
Degree	BSc					
Branch(s)	Family and Community Science (Home Science)					
Year	1					
Type	Add-On Course 1					
Credits	2	Credits	2	Credits	2	

Module	Course Description	Hrs
1.0	**Textile Science**	8
1.1	Classification of fibers - External properties of fibre used for making textiles. Classification – of Natural Modified, Artificial, Synthetic & Mixed fibers. General characteristics of vegetable, animal &synthetic fibre.	
1.2	Identification of Textile Fabric/Fibres Importance of textile fibres Test for the identification of fibres — the burning, creasing ,and breaking tests Reaction of textile fibres to chemical reagents	
2.0	**Pattern Making**	5
2.1	Methods of Pattern Making Drafting-Principles of Pattern Drafting-steps in drafting-children &adults bodices-sleeve patterns Grading -Back- front and Sleeve patterns	
2.2	Importance of taking body measurements: Principles ,Measurements needed for the construction of ladies, men's and children's garments.	
3.0	**Embroidery**	5
3.1	Definition – classification Principles-tools & equipments needed. Classification of needles, types of thread-selection of materials.	
3.2	Transferring methods- Carbon paper, direct transfer packing method, butter paper, iron on transfer, pouncing transfer paper, glass plate & tracing wheel ,Running stitch methods. Preservation & care of embroidery-selection of materials.	
1.0	**Practical**	
1.1	**Pattern Making**	4
1.2	Making paper patterns for miniature & master Pattern-zabla with sleeve & sleeveless Kitchen Apron, Romper, Sheath skirt	
1.3	Four gore skirt-A line frock-Umbrella frock-Midi top.	
2.0	. **Garment Designing**	

2.1	Garment Construction — Zabla , Infant dress , Baba suit with strap , umbrella frock	8
2.2	Designing & drafting two types of frocks — yoke frock , body frock ,skirt gathered bell sleeve , peterpan collar.	
3.0	**Embroidery**	6
3.1	Hand Embroidery stitches- Running-Whipped running-long &short-french knot-bullion knot-satin-button hole-fly-feather chain-chequered chain-double-chain-a sheaf.	

Course	Details				
Code					
Title	Diploma Course In Fashion Designing				
Degree	BSc				
Branch(s)	Family and Community Science (Home Science)				
Year	2				
Type	Add-On Course 2				
Credits	2	Hr/ Week	2	Total hrs	36

Module	Course Description	Hrs
1.0	**Pattern Making**	
1.1	Pattern layout -Tools in pattern layout - Common methods for layout -Layouts for asymmetrical designs - striped, checked & one way designs.	
1.2	Tools &equipments used in clothing industry -Marking toots -Cutting tools - Hand sewing &embroidery tools & Measuring tools - General tools -Pressing -Tools	
1.3	Sewing machine -Parts of sewing machine -Common machine faults & how to rectify them - Care of sewing machine.	4
2.0	**Textiles**	
2.1	Yarn construction Spinning -Early spinning with hands -Charka spinning - spinning machinery – size & count of yarn -Single strand yarn -ply yarn –slub yarn-loop yarn Knot yarn-the cork screw yarn.	
2.2	Construction of textile fabrics: Process of weaving - Description of loom - chief operations – selvedge, count of cloth & Types of weaving.	3
2.3	Finishes: Aim of finishes-Process of finishes- Mechanical Process-Chemical-Process	
3.0	**Color Textures**	
3.1	Color theory -Pigment theory –Munsell theory- Colour wheel-Prang Color System	
3.2	Color groups- Active-romantic lively-warm and cool colors-traditional color harmony- Harmony of related colors-Monochromatic- analogous. Harmony of contrast colors , polychromatic-Split complementary-Achromatic color harmony	3
3.3	Textures-satin-silk-cotton-chiffon-brocade denim strips-checks-organza-fur-Net-prints etc-	

4.0	**Photoshop**	
4.1	Working with files :- Opening, Saving, Reducing file size, Choosing a Format	
4.2	Selection Modes:- Selection Tools ,Feather, Modifying Selections, Cropping & Cutting ,Selection Transformation,	
4.3	Color modes :-RGB color, CMYK color ,Adjusting colors, Using Variation command	
4.4	Paint brushes & Art tools :-The Airbrush, Paint brush, History brush, Eraser, Pencil ,Brush palette	8
4.5	Working with Foreground & Background colors:- Selecting colors, Color picker ,Color palette, Eye dropper tool	
1.0	**PRACTICAL**	
1.1	**Garment designing**	
1.2	Drafting & Designing -Baloon frock -frilled frock - Ladies jacket - Paralles - six ,panel skirts - Manila shirt -Ghagra choli	**7**
2.0	**Pattern making**	
2.1	Making master & miniature patterns of collars -one piece two piece peter pan collar stand collar - open collar - shirt-collar - Scalloped collar - puriton collar .	
2.2	Drafting miniture & master patterns of balloon frock frilled frock ladies jacket - parallels - six panel skirt - manila shirt - ghagra choli	**5**
3.0	**Embroidery**	
3.1	Hand embroidery stitches - Fish bone - herring bone - (single & double) –long &short -couching -eye let – lazy daisy -trills stein - straight -vandyke - coral - pearl - basket weave .	**3**
3.2	Applique work - patch work- mirror work -chicken work - phulkari - smoking (English & French)	
4.0	**Fashion Drawing**	
4.1	Drawing figures –initial steps-Drawing different posters of male, female and children's figures- various angles based on measurements-Shading to show the effects of light	**3**
4.2	Easy methods of drawing eyes - nose -heads - legs etc .	

Course	Details				
Code					
Title	Advanced Diploma Course In Fashion Designing				
Degree	BSc				
Branch(s)	Family and Community Science (Home Science)				
Year	3				
Type	Add-On Course 3				
Credits	2	Hr/ Week	2	Total hrs	36

Module	Course Description	Hrs
1.0	**Pattern making and alterations**	
1.1	Methods of identifying pattern alterations-checking the front back & bodice and sleeve pattern. Pattern alterations-Importance of altering Patterns —General Principles of pattern alteration- common pattern alteration in a blouse	
1.2	Preparation of Fabric for cutting. Importance of grain in fabric cutting and garment construction.	
1.3	Methods of straightening fabric ends. Checking and straightening fabric- stretching, steam press methods. Immersion method. Shrinking fabrics.	
1.4	Garment Fitting and assembling – standards for a good fit-ease line-grain-set-balance. Steps in preparing a blouse for fitting solving fitting problems in a blouse and their remedies.	**5**
2.0	**Fashion**	
2.1	Seams and seam finishes. Neckline finishes Plackets. Seams — type of seam &their choice waking common seam & seam finishes —bias -cutting & joining — neckline finishes — bias- facing plackets —types of plackets. Seams — type of seam &their choice waking common seam & seam finishes —bias -cutting & joining — neckline finishes — bias- facing — plackets —types of plackets	
2.2	Designing sleeves, collar &cuffs.Sleeves — classification — types of sleeves; Collar — classification — types collars; Cuffs - classification — types of cuffs.	**5**
2.3	Designing yokes & adding fullness-definition classifications. Fullness-dart. Methods of dress making-homemade-tailor made & readymade	
3.0	**Fashion Merchandising**	

3.1	Introduction-fashion market levels. The role of the fashion buyer. Qualities of a successful buyer. The buying team. Quality control management sketch. The buying cycle. Review of current season. sales & budget planning	
3.2	Predicting fashion trends. Mail under fashion &market.	
3.3	Product line policies & strategies. Product mix. Factors influencing change in products mix. ISI standard for approval items. Promotional program for approval marking scope & importance of marking research.	**4**
4.0	**Fashion Accessories**	
4.1	Definition - types . classification superficial & incorporated accessories –Superficial-hand bags, belts, shoes, jewelleries, hosieries etc Incorporated — lace, labels & trimming.	
4.2	Making accessions -- hats, flowers-jewelleries. Walking method &application of it.	**4**
1.0	**Practical**	
1.1	**Garment Designing**	
1.2	Designing & drafting –saree blouse-salwar kameez — churidar - house coat - Nehru shirt — double breasted coat —bush shirt.	**2**
2.0	**Pattern Making**	
2.1	Making master & manufacture pattern of sleeves- roll up plain sleeve, bishop sleeve. Petal sleeve. Garment making --sleeve blouse - salwar - house coat Nehru shirt-bush shirt etc	**3**
3.0	**Frabric Painting**	
3.1	Tools &equipments - work place - fabric colors - acrylic pearls fluorescent, glitter metallic and pop-ups. Brushes - types of Brushes . Types on brushes care. Tracing paper – Palleto	
3.2	Preparing paint and palette- placing the ring - transferring design - various methods.	
3.3	Brush strokes C Strokes S -strokes - ribbon tear drop - scroll & dry brush strokes. Non brush techniques - threads - cotton - springing - impressions &vegetable printing.	**2**
4.0	**Photo Shop**	
4.1	Working with Focus and Tone Tools:- Blur tool ,Sharpen tool, Smudge tool,Dodge tool, Bum tool, Sponge tool	
4.2	Working with layers:- Creating, Reordering, Hiding/Showing, Removing, Linking layers Working with multiple layers Layer Blending modes Opacity Layer Effects Applying Layer masks	
4.3	Working with Paths Creating Editing Filling & Stroking a	

	path The path tools	**6**
4.4	Modifying the picture :-Using pattern, Blur tool, Lighting Effects Reflection Gradients	
4.5	Working with Text _Type tool Shadow Glows Bevel & Emboss	
5.0	**Fashion illustration**	**5**
5.1	Designing garments — application of colors — comparing designs — Designing & Current design.	
5.2	Stylish drawing - creating designs from inspiration.	