



University of Pune

Savitribai Phule Pune University, Pune

Second year B.Sc. (Home Science)

Semester III

Course Code	Course	Teaching scheme Hours/Week			Examination Scheme and Marks						Credit	
		Theory	Tutorial	Practical	Theory		Practical		Total	TH	PR	
					CIA	End Sem	CIA	PR				
HS-301	Residential Space Planning and Furnishing	03	01	04	30	70	20	30	150	3	1.5	
HS-302	Marriage and Family Studies	03	01	04	30	70	20	30	150	3	1.5	
HS-303	Textile Science	03	01	04	30	70	20	30	150	3	1.5	
HS-304	Nutrition For The Family	03	01	04	30	70	20	30	150	3	1.5	
EVA-231	Environmental Awareness	03	--	--	15	35	--	--	50	2	--	
LA-231	Communication Skill	03	--	--	15	35	--	--	50	2	--	
		15	5	18	150	350	80	120	700	16	6	
Total Credits										22		



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Semester IV

Course Code	Course	Teaching scheme Hours/Week			Examination Scheme and Marks						Credit	
		Theory	Tutorial	Practical	Theory		Practical		Total	TH	PR	
					CIA	End-Sem	CI A	PR				
HS-401	Consumer Education	03	01	04	30	70	20	30	150	3	1.5	
HS-402	Early Childhood Care and Education	03	01	04	30	70	20	30	150	3	1.5	
HS-403	Household Textiles and Apparels	03	01	04	30	70	20	30	150	3	1.5	
HS-404	Food Preservation	03	01	04	30	70	20	30	150	3	1.5	
EVA-241	Environmental Awareness	03	--	--	15	35	--	--	50	2	--	
LA-241	Communication Skill-II	03	--	--	15	35	--	--	50	2	--	
		15	5	18	150	350	80	120	700	16	6	
Total Credits										22		

SEMESTER- III

HS 301: Residential Space Planning and Furnishing (Th)

OBJECTIVES:

To enable students to –

1. Gain knowledge about the importance of housing needs and
2. Need of natural Lighting and Ventilation
3. Analyze and apply the principles of residential space design
4. Comprehend and apply the principles governing residential lighting design and the standards of designing lighting systems.

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical:4 Lectures

Practical: 50 Marks

Unit	Content	No. of lect.
Unit 1	Family housing needs <ul style="list-style-type: none">• Concept of Housing• Importance of Housing• Principles of Housing needs• Types of House plan	5
Unit 2	Choice of site for a house <ul style="list-style-type: none">• Location• Physical features• Soil condition• Legal factors• Shape and size• Amenities and services• Cost	4
Unit 3	Consideration of important features of house planning <ul style="list-style-type: none">• Rooms exposure or orientation• Grouping or room relationship• Circulation• Roominess or spaciousness• Economy• Privacy	6

	<ul style="list-style-type: none"> • Flexibility • Zoning • Sanitation • Aesthetics 	
Unit 4	<p>Planning of different rooms</p> <ul style="list-style-type: none"> • Living room • Dining room • Kitchen, Types of kitchen • Bedrooms • Storerooms • Passage and Lobby • Toilet • Staircase 	8
Unit 5	<p>Lighting and Ventilation</p> <ul style="list-style-type: none"> • Principles of lighting • Electric lighting • Lighting arrangement for various rooms <p>Ventilation</p> <ul style="list-style-type: none"> • Types of Ventilation • Methods of Ventilation 	8
Unit 6	<p>Furniture design and selection</p> <ul style="list-style-type: none"> • Definition and Importance of furniture • Selection of furniture <ul style="list-style-type: none"> ➤ Budget ➤ Material ➤ Atmosphere to be created ➤ Construction and Quality ➤ Family preferences ➤ Principles of design ➤ Climatic Condition ➤ Length of service ➤ Cost and Ease of maintenance ➤ Current Trends • Types of furniture • Arrangement and Care of furniture 	8

	<ul style="list-style-type: none"> • Concept of Eco-friendly furniture 	
Unit 7	<p>Furnishing –linen, flower arrangement</p> <ol style="list-style-type: none"> 1. Accessories 2. Floor Material 3. Curtain, Types of curtains, its care and maintains 4. Flower Arrangement <ul style="list-style-type: none"> • Importance of Flower Arrangement • Materials required for Flower Arrangement • Tips required for preserving flowers and flower arrangements <p>Different types of Flower Arrangement for different occasions</p>	6

PRACTICAL:

1. Observe the housing plan of different income group and collect the information
2. Learning and drawing simple floor plans with scale, considering the minimum size of rooms
3. House planning
 - a. Two room
 - b. Three room kitchen plan
 - c. Higher Income group
4. Study & draw the architectural symbols & furniture templates
5. Collect the sample pictures for lighting arrangement and ventilation
6. Conduct survey and write a report on Furniture design and selection
7. Conduct a market survey and collect the information and sample on floor coverings, furnishings and linen.
8. Flower arrangements for different occasions using different types and styles

REFERENCES -

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- Kumaraswamy N. and Kameswarra Rao (1998): Building planning and drawing: Charotar Publishing House, Anand
- National Building code of India. (1983), Bureau of Indian Standards, New Delhi
- Porter, Brian. Carpentry and Joinery (1990). Arnold, London
- Rangwala S.C. et al. Engineering materials (1996). Charotar Publishing House, Anand
- Seelcy Ivor H. Building Technology (1993). Macmillan Press Ltd, Hampshire
- Shah, M.G., Kale. Principles of Building drawing (1995). Macmillan India Limited, Delhi
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- Singh, Gurucharan and Subhash Chandar (2004): Building planning designing and scheduling: Standard publishers distributors, Delhi
- Verma, H.K.(Ed). Architects, interior designers and building trade desk book (1993). Magnum communications P. Ltd., Bombay
- National Kitchen And Bath Association (1996) .The Essential Kitchen Design Guide .New York: John Wiley and Sons. Inc.
- Lee, Vinny (1998). Kitchens. Ryland Peters and Small. London.
- Conran Terence. The Kitchen Book. Bruce Marshall. London
- Gilliatt Mary. (1983)Making the most of Kitchens and Dining rooms. London: Orbis.
- Graham, William. Lighting your home. Macmillan and Co.
- National Building Code Of India .I.S.I. Publication. Latest Edition.
- Bo.Niles and Juta Ristsoo. Planning the perfect kitchen. Simon and Schuster New York
- Conran Terence.(1989) Kitchen and Dining Rooms. Simon & Schuster Inc. New York
- I.S.I. code of practice for Interior Illumination (1966).I.S.I. Publication.
- Murrel, Rohin (1993).The Kitchen Planner. Mitchell Beazley International Ltd. London
- Senior, Johanna (1975). Work study in the Kitchen. Pitman Publishing. London
- Grey Johnny. (1995)The art of kitchen design: Planning for comfort and style. London: Casses.
- Faulkner and Faulkner. Inside Today`s Home, 1968, Holt, Rienhar and Winston. New York
- Gilliatt, Mary and Baker Douglas . 1980, Lighting Your Home –a practical guide London, Hutehinson and Co.

Semester III

HS 302: Marriage and Family Studies (Th)

OBJECTIVES:

1. To sensitize the students towards marriage and family.
2. To understand the traditional and changing norms of the institution of the family with reference to its social environment.
3. To get familiar with the concept of marriage and Planned Parenthood and the areas of adjustment within the family.
4. To become aware of problems in family and way of coping.

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical:4 Lectures

Practical: 50 Marks

Unit	Content	No. of lect.
Unit 1	Introduction <ul style="list-style-type: none">• Introduction of “Marriage and Family” as an institution and its importance.• Meaning of traditional marriage and its functions• Goals of modern marriage	10
Unit 2	Marriage <ul style="list-style-type: none">• Pre-marital Involvement, Marriage counseling; Pre-marital and post marital counseling• Mate selection: Guidelines for mate selection, Modes of mate selection, factors in self choice and arranged marriage• Engagement: Meaning, importance and functions of engagement, Broken engagement: causes, ways of coping.• Wedding and Honeymoon• Wedding: Traditional and Court Marriage Honeymoon: Values of honeymoon, Significance of honeymoon	15
Unit 3	Family <ul style="list-style-type: none">• Definition and types, functions of family• Family life cycle and developmental tasks, adjustments within family areas and patterns.• Alternate family patterns- causes, characteristics and implications.• Family crisis: Types of crisis and ways of coping.	10

Unit 4	Parenthood <ul style="list-style-type: none"> • Concept and significance of planned parenthood • Pleasures and hazards of parenthood • Family planning methods: advantages and disadvantages 	10
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PRACTICAL:

1. Survey on any one of the following topics
2. Mate selection criteria
3. Changing roles of family members
4. Pre-marital pre-preparation by youth
5. Critical qualitative analysis of Film-Serial / Advertisement on “Marriage Ceremony”
6. Workshop on Family Planning methods by Gynecologist & report writing.
7. Workshop on premarital counseling & report writing.
8. Visit to family counseling center or matrimony center.
9. Skit presentation on Family crisis.

REFERENCES

- Henslin J. M. (ed)(1989): Marriage and family in changing society. The free press U. S. A.
- Durall E. M. (1977): Marriage and family development Lippincott co.philadelphia.
- Dyer E. D. (1983): Courtship, Marriage and family, American style, The Dorsey press- Illians.
- Blood, Robert and Wolfe(1960): Husband and wife dynamics and married life: Free press, Newyork.
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- Smart S. and Smart M. S. (1980): Families- developing relationship, Mcmillan Publications, Newyork.

Semester-III
HS-303 Textile Science (Th)

OBJECTIVES

1. To acquire the knowledge of different kinds of natural and man-made fibers
2. To develop an understanding of different kinds of blends
3. To acquire the knowledge of different types of finishes
4. To acquire knowledge about fiber blends and their percentage
5. To create awareness about care of textiles

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical: 4 Lectures

Practical: 50 Marks

Unit	Content	No. of Lecture
Unit 1	Introduction- Fiber theory, fiber classification, fiber identification	10
Unit 2	Manufacturing process, properties and uses of following fibers Natural fibers – cotton, silk, wool, jute. Man -made fibers – Viscose Rayon, Polyester and Nylon.	10
Unit 3	Blends and union fabrics, their advantages and disadvantages and application	05
Unit 4	Laundry Equipment- Types and use Finishing –Ironing process Stain removal-principles, classification and techniques	10
Unit 5	Laundering process- Additives used in laundry Principles of dry cleaning-use of absorbents and solvents Disinfecting and storage of textile.	10

PRACTICALS

1. Identification of textile fibers-visual test, microscopic test, burning test, chemical test
2. Removal of common stains from different fabrics
3. Demonstration of laundry equipment, washing, finishing and storage of following textile articles cotton, silk wool, synthetics, blends.
4. Visit to a textile mill and report writing

REFERENCES

- Joseph M. – Essentials of Textile Science, 4th Ed, Fort Worth Harcourt Brace Jovanovich College Publishers.,1988.
- Potter and Corbman – ‘Fiber to Fabric’ 6th Edition, 1980-81 Gregg McGraw Hill comp. New York.
- Joseph M.L. – “Introductory Textile Science.” 6th Ed. Fort Worth, Harcourt Brace Jovanovich College publishers, 1993.

Semester –III

HS 304: Nutrition for the Family (Th)

OBJECTIVES:

- 1.To introduce the basic concepts of meal planning
- 2.To equip the knowledge of physiological changes, nutritional requirements and balanced diet
- 3.To relate the Principles of planning with specific nutrient requirements of various age groups
- 4.To incorporate healthy food choices during the life cycle

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical: 4 Lectures

Practical: 50 Marks

Unit	Content	No of Lecture
Unit 1	Overview of Nutrition and Nutritional Requirements: 1. Trends of nutrition in today's world 2. Definition and types of reference man, reference woman. 3. Factors affecting food consumption pattern 4. Nutritional requirements (R.D.A.) for various age groups. 5. Food guide and its use, food pyramid, balanced diet.	05
Unit 2	Nutrition in Adulthood: 1. Nutritional requirements of adults 2. Nutritional concerns in adults-underweight, overweight and obesity 3. Dietary guideline to reduce the cost of meal	05
Unit 3	Nutrition during Pregnancy: 1. Physiological changes during pregnancy - weight gain change in respiratory, cardiovascular, excretory, digestive system, Placental development and its function. (In brief). 2. Nutritional requirements and dietary guidelines during pregnancy and role of nutritional supplements. 3. Complications in pregnancy- Morning Sickness, constipation, preeclampsia, physiological anemia, Pica, Toxemia, Cigarette smoking and alcohol abuse	05
Unit 4	Nutrition During Lactation:	

	<ol style="list-style-type: none"> 1. Introduction to breast feeding and its advantages 2. Nutritional requirements of a lactating woman, 3. Breast feeding practices and common problems of breast feeding. formula feeding or breast milk substitutes. 4. Bottle feeding and its hazards. 5. Introduction to BPNI (Breast Feeding Promotion Network of India) 	05
Unit 5	<p>Nutrition During Infancy:</p> <ol style="list-style-type: none"> 1. Growth and development during infancy, changes in body composition (in brief) 2. Nutritional requirement during infancy-weaning, supplementary feeding 3. Nutritional concerns in infancy- Lactose intolerance, diarrhea 4. Immunization schedule 5. Nutritional requirement of Pre term and low birth weight infants, ARF 	08
Unit 6	<p>Nutrition in Preschool and school age period</p> <ol style="list-style-type: none"> 1. Growth and development 2. Nutrient requirements 3. Factors influencing food choices 4. Nutritional concerns during childhood- importance of weight management, dental caries 	06
Unit 7	<p>Nutrition in Adolescence:</p> <ol style="list-style-type: none"> 1. Adolescent growth and development 2. Nutritional needs of adolescents 3. Factors influencing food choice 4. Nutritional concerns in adolescence- nutritional anemia, 5. Underweight overweight, obesity, eating disorders- anorexia nervosa, bulimia, substance abuse 	06
Unit 8	<p>Nutrition for Elderly:</p> <ol style="list-style-type: none"> 1. Physiological and psychological changes during ageing and its effect on nutritional requirements 2. Nutritional concerns during ageing- underweight, bones and joints problems- osteoporosis, nutritional anemia 	05

PRACTICAL

1. Introduction to menu planning for the family use of food guide and exchange list
2. Plan and Prepare diet for sedentary adult man and woman and modify for moderate worker and heavy worker
3. Plan and prepare diet for sedentary, moderate and heavy work pregnant women.
4. Plan and prepare diet for sedentary, moderate and heavy work lactating women (0-6 and 6-12 months)
5. Plan and prepare complementary (weaning) foods for infants
6. Plan and prepare diet for a preschool child
7. Plan and prepare diet for a school going children
8. Plan and prepare a diet for an adolescents
9. Plan and prepare diet for elderly

REFERENCES:

- Mudambi, S. R. and Rajagopal, M. V. (2003) Fundamentals of Foods and Nutrition, 4th Edition, New Age International (P) Limited Publishers, New Delhi, India.
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- Guthrie, H. (1986) Introductory Nutrition, Times Mirror College Publication, Toronto, Canada
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- International Child Health: A Digest of Current Information
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- King, F.S. (1992). Helping Mothers to Breastfeed. Association for Consumers Action on Safety and Health, Mumbai
- Luke, B. Johnson, T.R.B.; Petrie, R.H. (1993). Clinical Maternal-Fetal Nutrition. Little Brown and Co, Boston
- Whitney, E. N.and Rolfes, S. R. (1996) Understanding Nutrition, 7th Edition, West publishing Company, St. Paul, U.S.A.
- Wardlaw, G. M. (2006) Perspectives in Nutrition, 7th Edition, McGraw Hill Inc, Europe

SEMESTER- III

EVA-231 Compulsory Subject: Environmental Awareness

OBJECTIVES:

1. To know environment
2. To know natural resources available in environment
3. To know the ecosystem
4. To know biodiversity and its conservation
5. Visit to local area and know environmental asset

Credits-02

Theory: 2 Lectures/week

Theory: 50 Marks

Unit	Content	No. of Lect.
Unit 1	Unit 1: Multidisciplinary nature of environmental studies Definition, scope and importance, Need for public awareness.	02
Unit 2	Natural Resources: Renewable and non-renewable resources: Natural resources and associated problems. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies.	08
Unit 3	Concept of an ecosystem. <ul style="list-style-type: none">• Structure and function of an ecosystem.• Ecological succession.• Food chains, food webs and ecological pyramids.• Introduction, types, characteristic features, structure and	07

	function of the following ecosystem:- Forest ecosystem, Desert ecosystem, Aquatic ecosystems	
Unit 4	Biodiversity and its conservation <ul style="list-style-type: none"> • Introduction – Definition: • Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values • Biodiversity at global, Hot-spots of biodiversity. • Threats to biodiversity: • Conservation of Endangered Species 	06
Unit 5	<ul style="list-style-type: none"> • Visit to a local area to environmental assets- river/forest/grassland/hill/mountain • Visit to a local polluted site-Urban/Rural/Industrial/Agricultural 	07

REFERENCES:

- Chaudhuri AB and Sarkar DD (2003) Megadiversity Conservation, Flora, Fauna and Medicinal Plants of India's Hotspots. Daya Publishing House, New Delhi.
- Sharma PD (2000) Ecology and Environment. Rastogi Publications, Meerut, India.
- Fundamentals of Ecology -E. P. Odum
- Environmental Pollution –S. M. Khopkar
- Krishnamurthy, K.V. An Advanced Textbook on Biodiversity – Principles and Practice, (2003). Oxford and IBH Publishing, New Delhi.
- Natural Resources Engineering (Pb 2016)- Tollner E.W -Wiley India (2005)
- Eco-Social Issues Of Environment Hardcover – 2015 by Bhavna H. Parmar
- Social Problems In India Unknown Binding – 2014 by Ram Ahuja

SEMESTER- III

LA 231: Communication Skill

OBJECTIVES:

1. To encourage the students to speak English.
2. To enable students to use English in day-to-day communication.
3. To expose them to light prose and poetry.
4. To prepare them for competitive exams.
5. To introduce them to different clause types, their form and functions.
6. To develop their sensibility towards correctness and appropriateness of language.
7. To make them aware of the various types of fiction.

Credits-02

Theory: 2 Lectures/week

Theory: 50- Marks

Unit	Content	No. of Lect.
Unit 1	Poetry- <ul style="list-style-type: none">• The feeling of the Banyan tree-Dilip Chitre• On Television-Ronal Dahl• Say Not the Struggle Naught Avaiesh-Arthur Hugh Clough	08
Unit 2	Prose- <ul style="list-style-type: none">• The gift of the Magi-O' Henry• The Bet -Anton Checkhov	08
Unit 3	Communication skill- <ul style="list-style-type: none">• Introduction to communication skill and its types, importance and principles of effective communication.• Dialogue writing<ul style="list-style-type: none">- Formal dialogue writing- Informal dialogue writing	07
Unit 4	Grammar and vocabulary- <ul style="list-style-type: none">• Parts of speech• Tenses-<ul style="list-style-type: none">a] Present tense –Simple, Continuous, Perfect, Perfect continuousB] Past tense –Simple, Continuous, Perfect, Perfect continuous tense	07

REFERENCES:

- DOVER. THRIFT. EDITIONS, O'. Henry. The Gift of the Magi and Other short stories. Publication Date-5 Feb 1992,
- Best short stories of ANTON CHEKHOV, Jaico Publishing House, genre: fiction.
- MASS COMMUNICATION IN INDIA, Keval J. Kumar, third completely revised & updated edition
- Hewings, M. 1999, Advanced English Grammar. Cambridge University press. .
- Krishna swami, N. Modern English – A book of grammar, usage & composition, Macmillan India Ltd.
- Contemporary English poetry by Kanver Singh

SEMESTER- IV

HS 401: Consumer Education (Th)

OBJECTIVES:

To enable students to –

1. Be aware of the consumer problem in the market
2. Awareness about consumer education
3. Become aware of the rights and responsibilities of consumer
4. Realize the importance of the effective role of consumers in the market
5. Develop good buymanship skill in the selection of goods in the market
6. Be aware of consumer protective services

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical: 4 Lectures

Practical: 50 Marks

Unit	Content	No. of Lect.
Unit 1	Consumer And Consumer Problems <ul style="list-style-type: none">• Definition of a consumer• History of Consumer Movement• Consumer Movement in India• Causes for slow growth of Consumer Movement in India• Consumer movement – Importance and Objectives• Definition of consumer Education and its importance• Need of consumer education and its Objectives• Consumer Problems<ul style="list-style-type: none">➤ Adulteration➤ Faulty weights and measures➤ Misleading advertisements➤ Other malpractices such as lack of safety and quality control regulations, limitation, misuse of colour matter, sales gimmicks, unfair warranties, massive profiteering, illegal trading, evil practices of multinationals	12
Unit 2	Advertisements And Consumer Guides <ul style="list-style-type: none">• Advertisement – Influence of advertisement on consumers, usefulness	08

	<p>of advertisement to consumers.</p> <ul style="list-style-type: none"> • Brands - meaning, types of brands, meaning of eco friendly packaging. • Labels as buying guides and types of labels. • Grading and Standardization – <ul style="list-style-type: none"> ➤ Meaning ➤ Types (qualitative and quantitative) ➤ Role of BIS, AGMARK, FPO, Eco marks, Silk mark, ISI, ISO, Wool mark, Cotton mark, Handloom mark, 	
Unit 3	<p>Consumer Decision Making Process</p> <ul style="list-style-type: none"> • What is consumer decision – types of consumer decision • Decision making process to include problem recognition, information seeking, evaluation of alternatives, buying decisions, post purchase ,evaluation. • Good buymanship 	08
Unit 4	<p>Consumer Rights And Responsibilities</p> <ul style="list-style-type: none"> • Consumer Rights (right to be heard, right to choose, right to be informed, right to seek redressal, right for protection, right to basic needs, right to consumer education and right to secure ecological balance). • Consumer responsibilities- critical awareness, action, social responsibilities, environmental awareness, solidarity. 	06
Unit 5	<p>Changing Nature Of The Business World</p> <ul style="list-style-type: none"> • e-commerce, e-business • Online shopping -cause , need , advantages and disadvantages • Consumer credit- need, sources, credit cards 	04
Unit 6	<p>Consumer Protection</p> <ul style="list-style-type: none"> • What is consumer protection, Need for consumer protection • Consumer Redressal Form <ul style="list-style-type: none"> ➤ Consumer protection, Acts (COPRA) ➤ Food Safety and Standards Act of 2006 ➤ FDA ➤ MRTP Act ➤ Food Adulteration Act ➤ Essential Commodities Act ➤ Packaged Commodities Act 	07

	<p>➤ Weights and Measures Act.</p> <p>Agencies like: CFBP, CERS, CGSI,</p>	
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PRACTICAL

1. Identify consumer problems related to Services/ food adulteration/faulty weights and measures/sale gimmicks
2. Detection of food adulterant chart
3. Illustrate the types of labels and Evaluation and designing of informative and attractive labels of different type of food products
4. Analysis of consumer rights and responsibilities
5. Differentiate between branding and misbranding and collect 5 examples
6. Observe and critically analyze 5 advertisements from any media and write a report
7. Celebration of National Consumer Day on 24th December (organizing slogan Competition, Guest Lecture, Poster Competition)

REFERENCES:

- Khanna S.R., Hanspal S., Kapoor S. & Awasthi H.K., 2007, Consumer Affairs, Universities Press India Pvt. Ltd.
- Sawhney, H.K. & Mital, M., 2007, Family Finance & Consumer Studies, Elite Publishing House Pvt. Ltd.
- Seetharaman, P. and Sethi, M., 2001, Consumerism: Strength and Tactics, New Delhi: CBS Publishers.
- Aggarwal Anju D. – “A practical Handbook for Consumers”, 1989, India Book House (Pvt) Ltd. Mumbai, India.
- C.N. Sontakki, R.G. Deshpande – “Marketing, Salesmanship and Advertising” – Kalyani Publishers, New Delhi – Ludhiana, 1984.
- Dr. S.C. Saxena – “Business Administration and Management”.
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- Nair Suja – “consumer Behaviour” – Text and Cases – Himalaya Publishing House, 1999.
- Niraj Kumar – “Consumer Protection in India” – Himalaya Publishing House, New Delhi.
- S.A. Chunawala – “Commentary on consumer Behaviour” – Himalaya Publishing House, New Delhi.
- S. A. Sherlekar, P.N. Reddy, H.R. Appannaiah – “Essentials of Marketing Management” - Himalaya Publishing House, Mumbai, 1995.
- S.S. Gulshan – “Consumer Protection and Satisfaction” – wiley Eastem Ltd, New Delhi, 1996.
- Sheth J.N. – “Model of Industrial Behaviour”. Journal of Marketing 1973, 37 [4].
- Sundaram I.S. – “Consumer Protection in India” – B.R. Publishing Corporation, Delhi, 1985.
- V.S. Ramaswamy, S. Namakumari, - “Marketing Management”, Second Edition, McMillian India Ltd, New Delhi, 1997.

Semester- IV

HS 402: Early Childhood Care and Education

OBJECTIVES:

1. To develop and understand the need and importance of early childhood education.
2. To develop and understand curricular planning.
3. To learn various skills required for conducting developmentally appropriate program for children.
4. To gain insight into the organization and management of a preschool center.

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical: 4 Lectures

Practical: 50 Marks

Unit	Content	No. of Lect.
Unit 1	Introduction Meaning , Importance and Objectives of ECE Organization of Preschool Centers: different types of preschool, physical setup, equipments- importance , selection & care Maintaining records and reports and its importance	10
Unit 2	Contribution of Child Educators and Programme planning Maria Montessari, Froebel Rousseau, Tarabai Modak, Ravindranath Tagore, Mahatma Gandhi, Learning through play Play meaning, values, types, stages, play – way method	10
Unit 3	Components of ECE programme Child directed and Teacher directed activities need and values. Long term and short term planning Creative activities-painting, cutting and pasting, blocks sand play, water play, clay modeling-values and role of teacher of teacher Language activities-Types and methods 1. Songs 2.stories 3.Puzzeles 4.Internal Talk 5.Object Talk 6.Selection of songs and stories for preschoolers. Science activities, Importance and Types, Role of Teacher Social Studies-Importance and activities and celebration of festivals Mathematics and 3 R.S. Types of activities	12

Unit 4	Working with parents and guiding children Importance of Parental Involvement and ways of parental involvement. Guiding children in Daily situation: Feeling of Insecurity and Hostility.	13
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PRACTICAL:

1. Observation of Nursery school and writing a report.
2. Creative a craft activities-Different types of drawing, Different types of painting. Different types of printing, Finger painting, Modeling, Tearing, cutting and collage making
3. Threading and Lacing-
4. Language Activities pictures book, Collection of objects
5. Story telling techniques. Preparing and telling a story
6. Science- Listing of science experiences
7. Mathematics- Preparing kit on pre mathematical concepts
8. Music and movement-Collection of songs (i.e. Marathi, Hindi, English) • Singing songs in right tune and pitch.
9. Making musical instrument
10. Readiness Activities- Reading readiness activities (Matching sets visual discrimination cards, Work pages etc.)
11. Writing Readiness activities (Pencil Fun Games, Simple to Complex activities).
12. Games: Indoor and Outdoor.

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Semester-IV

HS-403 Household Textiles and Apparels

OBJECTIVES:

1. To develop awareness about different household textiles
2. To acquaint students about education care maintenance of different home textiles
3. To study to psychological effects of clothing on the individual in social situations
4. To develop an ability in students to choose appropriate material for clothing for different age groups and select patterns for them to suit their activities

Credits-03+1.5

Theory: 4 Lectures/week

Practical: 4 Lectures

Theory: 100 Marks

Practical: 50 Marks

Unit	Content	No. of Lecture
Unit 1	Introduction, origin of clothing <ul style="list-style-type: none">• Variations in costumes due to material aspects and climate.• Religious influence on costume• Influence of events of the world• Providing mobility in clothing• Sports clothing requirement	07
Unit 2	Selection of clothing according to age group and gender Factors affecting selection of clothing – <ul style="list-style-type: none">• Economic factors• Psychological effects of clothing• Socio- psychological aspects of clothing Clothing symbolism, fashion, fad, costume, tradition, culture	08
Unit 3	Wardrobe planning <ul style="list-style-type: none">• Clothing and family budget• Individual clothing budget• clothing management	10
Unit 4	Clothing as a portable environment:	10

	<ul style="list-style-type: none"> • Protective clothing- health professionals, farm, industrial workers, fire fighters • Clothing design to accommodate physical disabilities and irregularities • Clothing design for military • Impact protective clothing • Significance of uniforms and national costumes 	
Unit 5	<p>History and evolution of household Textiles</p> <ul style="list-style-type: none"> • Furnishings importance and their functions. • Selection, care and maintenance of different household textiles- Table linen, bath linen, kitchen towels and napkins • Floor covering • Bed linen • Curtains and draperies 	10

PRACTICALS

1. Rug making from old fabrics
2. Making of any home textile article by using embroidery
3. Survey on selected functional clothing available in the market
4. Designing clothing for pregnant women and nursing mothers. Specify (illustration or stitching)
5. Project Making - Study of various household textiles-fiber content, yarn type, weave, design and finish.

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Semester -IV

HS 404: Food Preservation (Th)

OBJECTIVES

1. To understand the basic principles of food preservation.
2. To understand the need and scope of food preservation
3. To learn the various preservation techniques and their applications
4. To develop an awareness regarding commercial techniques of food preservation and Packaging

Credits-03+1.5

Theory: 4 Lectures/week

Theory: 100 Marks

Practical: 4 Lectures

Practical: 50 Marks

Unit	Content	No. of Lecture
Unit 1	<ul style="list-style-type: none">• Introduction to food preservation• Importance, scope and objectives of food preservation• Basic principles of food preservation• Traditional methods of food preservation.• Selection criteria for preserved food products• Factors affecting post-harvest storage stability of foods.• Causes and classification of food by ease of spoilage	06
Unit 2	Methods of food preservation: <ul style="list-style-type: none">• Asepsis or keeping out micro organisms, different techniques applied for asepsis.• Removal of micro organisms, use of different filters and other techniques to remove micro organisms-washing, centrifugation, filtration	04
Unit 3	Methods of Food Preservation involving temperatures Use of high temperature <ul style="list-style-type: none">• Factors affecting heat resistance, TDT and Pasteurization• Canning (green peas, mushroom, mango pulp, pineapple) and its use in food industry	06

Unit 4	Use of low temperature- Blanching Freezing (slow, quick freezing) frozen storage, changes during storage and thawing	06
Unit 5	Drying or dehydration- Factors affecting dehydration, pretreatments and post treatments, different techniques of dehydration. sun dryer. foam mat dryer, tunnel drying, vacuum drying, Intermediate moisture food	06
Unit 6	Other Methods of Food Preservation- Use of preservatives 1. PFA classification of food preservatives- class I and class II preservatives, developed preservatives. 2. Irradiation, its advantages and disadvantages. 3. Other methods- microwave heating, hurdle technology, wax emulsion	12
Unit 7	Food Packaging 1. Importance of packaging 2. Types of packaging materials available in the market. 3. Characteristics of an ideal packaging 4. Advantages of packaging 5. FAO, FSSAI, AGMARK, HACCP, PFA	05

PRACTICAL:

1. Introduction to Food Preservation -Aseptic handling in laboratory
2. Sugar preserves:- Preparation of jam, jellies, morabba and marmalade, Preparation of fruit peels, toffees
3. Sauces: Preparation of tomato ketchup and sauce, Preparation of Red chilli, Green chilli and tamarind sauce
4. Syrups and squashes:
5. Home scale methods for making synthetic syrups and squashes (Pineapple, Sweet lime, Lemon, Orange)
6. Preparation of the following:
 - a. Masalas (Tea, Milk Masala, Sambhar, Pav bhaji, Chat Masala, Garam Masala,)

- b. Dry Chutney (Metkut, Dangar, Niger Seed Chutney, Flax Seed Chutney, Coconut Chutney)
7. Freezing of fruits and vegetables
8. Regional/Dehydrated foods (Sandage, Kurudai, Wafers and Papad)
9. Preparation of pickles (on basis of expected shelf life): Short and long shelf life pickles, Sweet pickles, Spicy and sour pickles with or without oil (Lemon, Mango, Green Chillies and Mix Vegetable Pickles)
10. Visit to canning, cold storage plants and various industries

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- Dr Swaminathan .M., Food Science Chemistry and experimental Foods Published by the Bangalore Printing and Publishing co. Ltd.
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SEMESTER- IV

EVA-241 Compulsory Subject: Environmental Awareness

OBJECTIVES:

1. To know different types of environmental pollution
2. To know social issues related to environment
3. To know impact of environment on human population
4. To learn about environmental problems and give opinions to resolve issues

Credits-02

Theory: 2 Lectures/week

Theory: 50 Marks

Unit	Content	No. of Lect.
Unit 1	Environmental Pollution Definition, Cause, effects and control measures of:- <ul style="list-style-type: none">• Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution• Nuclear hazards• Solid waste Management: Causes, effects and control measures of urban and industrial wastes.• Role of an individual in prevention of pollution. Disaster management: floods, earthquake, cyclone and landslides	08
Unit 2	Social Issues and the Environment <ul style="list-style-type: none">• Water conservation, rain water harvesting, water shed management• Resettlement and rehabilitation of people; its problems and concerns. Case Studies• Environmental ethics: Issues and possible solutions.• Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents• Consumerism and waste products.• Environment Protection Indian Act.	05
Unit 3	Human Population and the Environment <ul style="list-style-type: none">• Population growth,• Population explosion	07

	<ul style="list-style-type: none"> • Environment and human health. • HIV/AIDS. • Women and Child Welfare. • Role of Information Technology in Environment and human health. 	
Unit 4	Project work	10

REFERENCES:

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- Sharma PD (2000) Ecology and Environment. Rastogi Publications, Meerut, India.
- Fundamentals of Ecology -E. P. Odum
- Environmental Pollution –S. M. Khopkar
- Krishnamurthy, K.V. An Advanced Textbook on Biodiversity – Principles and Practice, (2003). Oxford and IBH Publishing, New Delhi.
- Natural Resources Engineering (Pb 2016)- Tollner E.W -Wiley India (2005)
- Eco-Social Issues Of Environment Hardcover – 2015 by Bhavna H. Parmar
- Social Problems In India Unknown Binding – 2014 by Ram Ahuja

LA 241: Communication Skill-II

Credits-02

Theory: 2 Lectures/week

Theory: 50 Marks

Unit	Content	No. of Lect.
Unit 1	Poetry- 1. The Indian Women -Shiv K Kumar 2. Stay Calm-Grenville Kleiser 3. Abou Ben Adhem -James Leigh Hunt	08
Unit 2	Short stories 1. The Axe -R.K. Narayan 2. Luck -Mark Twain	08
Unit 3	Writing skill- <ul style="list-style-type: none">• Writing a letter<ul style="list-style-type: none">- Application letter- Complaint letter- Enquiry letter• Writing a Resume• Preparing a menu- card	07
Unit 4	Grammar and vocabulary- <ul style="list-style-type: none">• Synonyms and Antonyms• Word formation process- Affixation , Borrowing, Coinage, Blending• Sentences and its types• Subject- verb- concord• Future tense -Simple, Continuous, Perfect, Perfect continuous tense	07

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2. Krishna swami, N. Modern English – A book of grammar, usage & composition, Macmillan India Ltd
3. Anthology of English poetry, the Rainbow, By Bishwnath Gosh
4. Indian poetry in English by Rajni Singh & Ramakrishna Singh